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ABSTRACT

This bulletin provides a context for and an overview of cooperative learning addressing concerns and answering questions teachers, supervisors, and parents may have about this group approach to teaching and learning in the social studies. The intention was to help social studies educators construct a sound conceptual foundation for cooperative learning while eliminating misconceptions. Nine chapters detail building an adequate introductory conceptual framework for envisioning cooperative learning as a viable alternative approach to teaching in the social studies classroom. The first chapter introduces the concept, philosophy, and practice of cooperative learning. The second chapter focuses on the classroom environment and classroom characteristics with and without cooperative learning groups. Chapters 3 and 4 contain reviews of the literature that address effects of cooperative learning in classroom settings. Chapter 5, 6, and 7 focus on classroom teachers. In these three chapters teachers from first grade through secondary school discuss how cooperative learning has worked in their classrooms. They provide a unique perspective on how one can make the transition from using traditional teaching methods to becoming a successful user of cooperative learning. Practical ideas about how to implement cooperative learning in social studies classrooms are included, as well as some historical context for group learning. The final chapter features a dialogue of a group of teachers who are training to use cooperative learning. A position statement on ability grouping is included. (DK)

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Cooperative Learning Social Studies Classroom

An Introduction to Social Study

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Edited by
Robert J. Stahl and Ronald L. VanSickle

Bulletin No. 87

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Cooperative Learning in the Social Studies Classroom: An Invitation to Social Study

Edited by
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Bulletin No. 87

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Preface

From the beginning, our intention was not to provide a recipe book with step-by-step procedures that a teacher could follow starting tomorrow. Such procedural information is provided in detail elsewhere. Rather, in this bulletin we provide a context for and an overview of cooperative learning addressing concerns and answering questions teachers, supervisors, and parents may have about this group approach to teaching and learning in the social studies. Our intention was to help social studies educators construct a sound conceptual foundation for cooperative learning while eliminating misconceptions that may exist. The chapters provide abundant details toward building an adequate introductory conceptual framework for envisioning cooperative learning as a viable alternative approach to teaching within the social studies classroom.

In the first chapter, we introduce the concept, philosophy, and practice of cooperative learning along with an invitation to classroom teachers at all levels to take steps toward using cooperative learning with their students. We also address a number of misconceptions about cooperative learning and provide clear statements of fundamental guidelines of this alternative approach to instruction in our introductory chapter. We suggest that cooperative learning addresses the *social* and *study* requirements of social studies education and provides one vehicle whereby students can improve together.

The classroom environment and characteristics of classrooms both with and without cooperative learning groups are part of the second chapter's focus. Here, Robert Stahl provides a look at life in the classroom from the student's perspective. He presents two scenarios that contrast life with and without appropriate cooperative learning activities and groups. In addition, he describes a model for what each student needs to be a successful learner along with how cooperative learning groups may function to facilitate success for any knowledge or ability social studies educators desire for their students.

Chapters 3 and 4 feature reviews of the literature that address effects of cooperative learning in classroom settings. Ronald VanSickle presents a reader-friendly version of the research findings in the form of a hypothetical dialogue between an advocate of cooperative learning and a teacher seeking information about how effective this approach to teaching has been and can be. In chapter 4, Robert Slavin provides a review that focuses on the research evidence related to specific cooperative learning approaches and to specific types of academic achievement, affective growth, and interpersonal and social interaction skills. The two chapters provide contrasting yet complementary versions that both synthesize the research and discuss the implications of these findings for social studies education. Slavin suggests that cooperative learning can help provide a balance between the *social* and the *study* aspects of social studies education.

Classroom teachers are the focus of chapters 5, 6, and 7. Robert Colomb, a 2d grade teacher in Provo, Utah, describes his experiences using cooperative learning with students in grades 1 through 6. His insights, along with those of George Chilcoat and Nancy Stahl, describe the growth of one elementary-level teacher into a highly effective facilitator of cooperative learning groups. Four middle school classroom teachers, one assistant principal, and one university faculty member have collaborated to describe the progress of four middle school teachers in their efforts to use cooperative learning in their respective classrooms. William McKendry, a strong, early proponent of cooperative learning in his school, facilitated the growth of three of his colleagues, Dennis Dool, Michael Smith, and Myra Wolpert. All four grew and are still growing to become effective users of cooperative learning theory and strategies. The efforts of this four-member faculty team and the support provided by assistant principal Philip Selim are described here with the assistance of Eric Luce, a social studies teacher educator who spent many years observing and interacting with these middle level educators in their school. Robert Mattingly describes his success with cooperative learning in chapter 7. As a secondary level social studies teacher, Mattingly provides details on how he began using cooperative learning and field-tested one strategy in his own classroom.

Classroom teachers should read all three of these chapters as should supervisors and administrators at all levels. They provide a unique perspective on how one can make the transition from using traditional teaching methods to becoming a successful user of cooperative learning in typical school situations. Here, the teachers disclose their initial concerns, efforts, sources of frustrations, and how they became skillful users of the cooperative learning theory, philosophy, and strategies. In many ways these three chapters are the most powerful in this bulletin.

David and Roger Johnson follow these chapters with a number of practical ideas about how to implement cooperative learning in social studies classrooms. They begin by providing a brief historical con-

text for using groups in educational settings and move quickly into stating useful information on the philosophy and strategies of cooperative learning. This chapter addresses many teachers' concerns about whether cooperative learning can be a viable alternative strategy for them.

The final chapter provides, in dialogue form, an account of a group of teachers engaged in the transition of becoming cooperative learning teachers under the guidance of a staff development team from Stanford University. Elizabeth Cohen, Rachel Lotan, and Jennifer Whitcomb describe a number of concerns teachers have about using cooperative learning in their classrooms and in learning to use cooperative groups as an alternative teaching strategy. This chapter illustrates how a staff development team may work collegially and cooperatively with in-service teachers, enabling them to become successful users of cooperative learning.

The purpose of this volume is to reflect upon what students and social studies educators can gain by rejecting the competitive, rugged-individual illusions and choosing to develop a cooperative perspective on learning. What can we gain by having students work cooperatively in small groups rather than spending much of their time doing their academic work alone? What evidence is available that social studies students achieve more by working together cooperatively than by working alone or by competing for a limited number of rewards? What instructional alternatives might enable more of our students to achieve the attitudinal social studies goals we set? What might a teacher gain by using cooperative learning groups as an alternative to conventional individualistic and competitive instructional strategies?

On behalf of the National Council for the Social Studies Committee on Research, we have endeavored to bridge the theory, philosophy, research findings, and essential features associated with cooperative learning to provide a readable and practical introduction to this instructional alternative for social studies classroom teachers, supervisors, and administrators at all levels. This was an ambitious task. Neither of us was trained as a bridge builder. In the end, we believe that we have been, in large part, successful.

—Robert J. Stahl and Ronald L. VanSickle

The editors extend their appreciation to Nancy N. Stahl, Gifted Education Specialist, Arizona Department of Education, Phoenix, and Joanne Curran, Division of Psychology in Education, Arizona State University, Tempe, for their assistance in proofreading, offering editorial critiques, and checking reference citations for all chapters of this bulletin.

Chapter 1 One

Cooperative Learning as Effective Social Study within the Social Studies Classroom: Introduction and an Invitation

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and
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Nothing is so practical as a good theory.
—Kurt Lewin

One of the strongest illusions that influences many educators' and parents' notions of the nature of schooling elevates and sometimes glorifies noncooperative attitudes and behaviors. "Only the strongest survive," "It's a dog-eat-dog world," and "Competition makes the world go around" are frequently heard expressions of this illusion about preparing students for the real, competitive world that exists out there beyond the school yard and the school years. We tend to forget that the real world exists for students every moment they are outside school and inside their school as well.

A complementary illusion is that of the rugged individual—the strong, self-sufficient, and independent individual coping in the real world and achieving great things alone against great odds. Charles Lindbergh, Jane Addams, Martin Luther King, Jr., and George Washington, for example, are lauded for their personal accomplishments as though they had no colleagues or support groups that worked cooperatively to help them achieve their dreams and hopes. Focusing on what individuals have done as though they were alone in their endeavors is to overlook and misrepresent how these individuals worked toward their goals. As students find answers to questions such as "How was it possible for Charles Lindbergh to fly nonstop across the Atlantic?" and "What factors contributed to the success of Jane Addams's Hull House in Chicago?" they discover the network of cooperative support that contributed to the successes associated with each individual.

Social studies educators strive to enable their students to become educated and competent so that they will be successful in the world. Students should study individual and group actions, thoughts, and artifacts in ways that will both facilitate their achievement of selected social studies knowledge and abilities and enable them to function well inside and outside the social studies classroom. Our task as professional educators is not to establish a mini real world in the classroom where students are left to sink or swim on their own as though the purpose of school is to provide survival experiences. Rather, we need to continue to work in our classrooms so that whenever and wherever students hit the water, they will be able to swim well both on their own and with others from then on.

We will attempt to provide answers to such questions throughout the chapters that follow. The answers strongly indicate that appropriate cooperative learning groups can result in large numbers of students achieving our expectations for them both inside and beyond the social studies classroom.

This chapter builds a conceptual framework for understanding cooperative learning as an alternative instructional approach. We introduce the cooperative learning approach to social study by examining a number of assumptions about students as learners and about social studies educators' commitments to achieving the maximum learning for their students.

Assumptions

We assume that students enter the social studies classroom wanting to succeed and not merely to survive. Students want their studies to make sense and to mean something from their own perspectives. They want to leave school with new knowledge, abilities, and orientations that will enable them to function well in the world as well as within the school and the social studies classroom.

We assume that virtually all students can learn nearly every set of knowledge, abilities, and perspectives that social studies educators expect them to learn. We are optimistic about what students can learn within appropriate instructional environments. This view of learners suggests that we can provide learning environments in schools that will help improve students' learning and thus motivate them about social studies topics, content, and abilities. Furthermore, this view reinforces the belief that every student should attain social studies goals and

abilities. Finally, this view values each student as an individual capable of achieving success in the classroom regardless of conditions outside that classroom.

We assume that academic success eventually leads students to engage actively in activities likely to continue that success. Students who do well in particular areas of the social studies tend to be interested in other topics and data they perceive as related to these areas. Students who do well in the prerequisite knowledge and abilities are more likely to be successful and interested in complex and challenging topics, knowledges, and abilities. Conversely, students who do not have the prerequisites or prior successes are not likely to become or remain interested in social studies topics without them. Social studies teachers must not assume that topics, activities, and teacher personality will automatically motivate students who lack the prerequisites to become highly involved, interested, and studious. Therefore, teachers who are concerned about the levels of their students' interest and achievement need to consider using strategies that facilitate student success. These teachers will find that as they use these strategies appropriately, their students will tend to improve their learning and their interest and involvement in social study.

We assume students expect their teachers to do what is necessary to facilitate successful attainment and maintenance of the targeted knowledge, abilities, and orientations. They hope that their teachers are committed to taking them from where they are to as high a level as they are able to achieve. They hope their teachers do not intend to teach only as much as is convenient for the entire class to cover. These expectations and hopes are consistent with an essential reason for providing social studies education—to prepare young people to be humane, civil, rational, participating citizens in a world that is increasingly interdependent, pluralistic, and changing (NCSS 1979).

We assume that social studies educators are committed to providing students with quality curriculum and instructional opportunities that facilitate their attainment of valued social education goals.

We assume that social studies educators, because they are professionals, will seek out, seriously consider, and, where appropriate, learn to use alternative curriculum and instructional strategies to help each student achieve maximum success. Consequently, we assume that in situations where students are not learning the academic content, are not using appropriate social interaction abilities, or are not attaining the positive self-conceptions teachers expect, teachers will seriously consider an instructional approach that offers considerable promise for changing the situation in their classrooms. Cooperative learning is one approach that, from theory through actual classroom practice, works in helping students become successful learners.

We assume that teachers who have students who are achieving at acceptable levels and who use many appropriate social interaction behaviors will continue to search for and use instructional strategies that may increase the positive results of their present strategies. In other words, we assume that social studies educators have a continual desire to improve their teaching.

Finally, we assume that to be effective in a school setting requires a considerable amount of cooperative effort and support from one's colleagues to ensure that appropriate *social study* occurs within the social studies classroom.

Social Study in the Social Studies Classroom: "Getting Better Together"

Social studies classroom instruction has always included individual and group work. Thinking about what constitutes effective social studies instruction has generally focused on specific subject matter and citizenship knowledge, abilities, and perspectives. Consequently, teachers who emphasize the learning of these knowledge bases, abilities, and perspectives are teaching social studies. Group activities are often integral parts of classroom instruction. Students participate in groups within which they are to acquire and practice abilities associated with effective citizenship. Teachers expect students to communicate clearly, use social and group interaction abilities, and work together to complete assigned group tasks.

Effective social studies teaching also involves appropriate *social study*.

In this context, the word *social* reminds us that the words and language rules we use in the classroom are part and parcel of culture. We think and speak using terms, symbols, grammar, and meanings that are integral parts of the language that we share within our society. Although students construct and ultimately must make knowledge their own, they do so in one or more societies or subgroups that influence, share, and interact using language. In addition, students use, share, negotiate, and revise meanings according to the verbal and nonverbal language others use in their social world.

Social also refers to the need to engage in worthwhile, goal-oriented tasks within supportive interpersonal environments. These social tasks and environments need to be relatively frequent and endure over extended periods of time. Within such environments individuals must become active, contributing, and integral parts of the social community that benefits from their participation. To be effective within this social environment, students must learn and practice the knowledge, abilities, and attitudes necessary to function effectively within the social group and as part of the social community that is formed. Individuals must have a sense of belonging to, participating in, and contributing to one or more groups as a viable, personally meaningful, social community.

According to this view of the term *social*, it is not

enough to be in a classroom of students who may on occasion interact or do things together in small groups or as a class. Individuals in a class must come to sense that they constitute a meaningful social community in which certain actions and attitudes are acceptable and others are unacceptable. They must come to value what the community and the required social interaction mean and can do for them. If we generate such environments in the classroom, students will not see themselves as individuals in a class, but rather as members of a social community that happens to meet in a social studies classroom.

This view of *social* is consistent with the essence of effective citizenship within any community. If individuals are to participate and contribute, they must have a sense that the community is worthwhile and that their involvement will have both personal and social meaning. Individuals must be an integral part of the group rather than merely working alongside others in the group. They must come to believe that their voices can help to change society and that their votes count to change and improve society. Individuals must sense a personal power within the social group and believe that the group will benefit from their contributions. Likewise, students must perceive and receive benefits from active participation within their community (the classroom).

By *study* we mean the systematic and focused pursuit of knowledge and the ability to apply that knowledge when needed. Students should engage in inquiry, apply appropriate study skills, or use other strategies for acquiring knowledge and abilities; they should not merely complete projects either by themselves or in groups. Consequently, when students finish their study, we and they should expect that they are able to do things they could not do prior to this effort.

If *social study* is to become a component of social studies classrooms, teachers must find ways to enable students to form viable social communities that work cooperatively and systematically to acquire new knowledge and abilities as a group. Members must see these groups as beneficial both for themselves and for the group. That is, each individual must be a successful learner and the achievement of the group *as a group* must be relatively high. Teachers need to structure classroom activities, rewards, and student roles such that students establish a social community and participate as effective members of this community at the same time focusing on achieving the shared learning goals.

Cooperative learning strategies are a means by which social studies teachers can arrange for, promote, and reward social study in their classroom. As students engage in completing appropriate social study activities, they are likely to benefit in a wide variety of ways beyond academic achievement and become skilled at using social interaction behaviors.

One way to envision cooperative learning group participation and benefits is captured in the expression "Getting Better Together."[1] By working with one another in appropriate ways, students enhance each other's knowledge and abilities as well as their own. Essentially, by working together to facilitate each other's learning, students "get better" individually and "get better together" as a team focused on team success.

These strategies, however, are not likely to be used appropriately unless the teacher has an adequate conceptual view of cooperation and cooperative learning.

Building a Conceptual Framework about Cooperating to Learn and Cooperative Learning Groups

The notion that teachers can achieve positive results consistent with social studies education goals through the use of cooperative groups is not new to the social studies. Social studies teachers have always expected—and continue to expect—that cooperative groups must be more than collections of students who sit together, complete essentially independent tasks, and fit their individual parts together so that they have a single product as proof of their cooperative effort. Students are expected to work *as* groups and not merely *in* groups. They are to work with one another as a team of learners and as full partners in each other's learning efforts and success. When such group cooperation exists over a sufficient period of time, both the quantity and the quality of interaction are high and student achievement for all is optimal for the time spent.

Slavin (1983) delineated cooperative learning as a distinct instructional model with particular criteria that separates it from typical group work and group activities. For Slavin, teachers need to establish heterogeneous groups of four to six members who are mutually responsible for each other's success relative to the same knowledge and abilities. Group members earn recognition, rewards, and sometimes grades based upon the academic achievement of their respective groups. This does not mean that all cooperative learning model-builders share all of these criteria and set the same expectations, goals, and guidelines. Sufficient overlap and consistency across many of these models, however, maintain the integrity of each as an example of cooperative learning.[2]

Teachers are most likely to use cooperative learning strategies correctly once they build an adequate conceptual framework that provides the perspective needed to carry out the strategies on a moment-by-moment and day-by-day basis (Johnson, Johnson, and Holubec 1990). This framework should work to modify present misconceptions about cooperating to learn and cooperative learning groups and prevent future misconceptions from arising. Below are a number of ideas that should become permanent fixtures in conceptions of cooperative learning.

(1) *Not all cooperative groups are instructionally effective* (Slavin 1990). Leaders in this field continually

caution teachers, supervisors, and administrators against believing that cooperative learning strategies simply involve students jointly working to complete group projects or worksheets. Students working in groups do not necessarily constitute cooperative learning groups, and all the positive effects of cooperative learning will not automatically result. In short, *all cooperating groups are not equal*; only those that meet the guidelines and standards for cooperative learning warrant this label. Later chapters will introduce the elements necessary to ensure that cooperating groups become *successful* cooperative learning groups.

(2) *Cooperative learning is not against all competition.* Advocates of cooperative learning are not opposed to all competition; rather, they oppose *inappropriate* competition (Johnson and Johnson 1991). Indeed, one cooperative learning model, Teams-Games-Tournament, builds in a competitive phase as part of the instructional strategy. Proponents believe that cooperative groups in and of themselves do not guarantee quality, positive interaction, group success, and individual achievement. Cooperation is not envisioned as a miraculous activity that works merely because one engages in or is expected to use it. Sports enthusiasts are well aware that some basketball teams operate as five individuals on the court who just happen to wear the same color uniforms. Although these individuals may play alongside one another, the extent of their cooperation in this situation is minimal. For cooperative learning groups to be effective, students must come to envision their group as a team whose members have two mutual goals in mind: the group's success as a group and the highest possible individual achievement of every group member. Students must also accept their peers as academic and social teammates who share equally in the team's ultimate success or lack thereof.

(3) *Cooperative learning strategies should not replace all other teaching strategies in the social studies classroom.* Cooperative learning is intended to be an alternative approach to structuring teaching and learning tasks. Consequently, teachers may continue to use instructional models and activities that effectively help students attain the many positive goals they set. Students need to learn how to succeed as individuals in individually important activities such as exploring personally interesting topics or becoming proficient at individual abilities. They also need to engage in competitive situations so that they learn to handle both the challenges of competition and the fun involved in pursuit and rivalry (Johnson et al. 1984). Using cooperative learning techniques, social studies teachers should modify, not replace, their current teaching styles and methods. Cooperative learning groups can take on many forms, all of which require that students work *interdependently* in small groups to help each other acquire and retain the academic content, knowledge, and abilities set for them.

(4) *Cooperative learning approaches are instructional guides, not curriculum guides.* Cooperative learning models are strategies for structuring the learning environment within classrooms. These models cannot substitute for, make obsolete, or make up for poor curriculum decisions (Stahl 1990). They cannot improve curriculum decisions already made. These models are tools that facilitate student progress toward achieving the cognitive, affective, and social outcomes set *within the curriculum used.* These strategies are what teachers use after the curriculum decisions have been made. In other words, one does not start with cooperative learning and then plan the curriculum. Rather, one makes the curriculum decisions and selects the cooperative learning strategies that are most appropriate for the students involved and the learning they need to accomplish.

(5) *Cooperative learning models are independent of the outcomes selected and the materials used during the group tasks* (Stahl 1990). Teachers may use many cooperative learning strategies in connection with textbooks, content-filled handouts, or other printed resources—nearly any resource aligned with what students are to learn. If a teacher uses a strategy only in reference to a textbook, however, the teacher's decisions—and not the strategy—are solely responsible for this textbook dependency. If a teacher uses a particular cooperative learning strategy only to help students memorize and recall basic facts and low-level skills, this also reflects a decision the teacher has made. Every cooperative learning strategy, when used appropriately, can enable students to move beyond the text, memorization of basic facts, and learning lower-level skills. Each strategy can serve to help students become proficient transferers of academic and social knowledge and abilities.

(6) *Cooperative learning techniques or strategies are structured ways of operating within a classroom.* One key for ensuring that cooperative learning models work is to envision each model as describing a *particular way to structure the learning, the learning task, and the learners' roles* (Kagan 1989, 1989–90). Such structures are content-free ways of organizing social interaction aimed toward enabling all students to be successful. Structures provide steps, guidelines, and requirements that, when met, will allow students to achieve their maximum potential in alignment with clear outcomes. Teachers may use structures such as Jigsaw, Coop-Coop, and Teams-Games-Tournament over and over across an extremely wide range of topics, content, grade levels, and outcomes (Kagan 1989, 1989–90). These structures differ according to their cognitive processing, academic, affective, and interpersonal emphasis, length of time for completion, required teacher and student roles, usefulness for selected content, and degree of complexity.

(7) *Each cooperative learning strategy should be viewed as a structured way of operating within the classroom—not as an activity.* The distinction between a

learning structure and an activity is important. Activities like those found in many books and articles describe what a teacher might ask a group to complete within a single lesson or unit. Students might complete the activity, however, without students or the teacher ensuring that they are meeting requirements for appropriate cooperative learning group work. *Merely because one labels an activity a cooperative learning activity or strategy does not make it so.* What counts is that the learning task(s) and environment are structured such that the requirements are met. When students complete appropriate cooperative learning tasks, teachers find that large numbers of students leave the group tasks and the course with high levels of success for the outcomes set for them.

(8) *Each group member needs to learn appropriate cooperative learning group behaviors.* Students must acquire, practice, and refine the variety of positive group behaviors necessary for them to work as a group so that they become skilled users of these abilities and accompanying attitudes. We cannot expect students to bring all the appropriate abilities and attitudes with them to these groups or to develop them simply by being told to work as a group. In many instances, teachers will need to take time before they form the groups, during the group interactions, and after the groups have finished to describe particular productive and dysfunctional group behaviors and attitudes. These are as much a part of the group learning process as the academic content and abilities. Proponents of cooperative learning emphasize the need to help students learn what is necessary to contribute to the group's goal-directed efforts.

(9) *Appropriate cooperative learning structures and guidelines are neither simple nor easy to implement* (Johnson et al. 1984). Even for teachers who have used groups in the past, learning concepts and procedures of cooperative learning strategies and properly implementing them in the classroom requires time, effort, and adherence to the criteria provided. Although the concept of cooperation is simple and appealing, teachers should not assume that achieving high levels of cooperation for learning will be easy. Cooperative learning as an approach to teaching generally, and the various cooperative strategies in particular, are complex ways of operating in the classroom. They require the typical teacher to use a number of new behaviors that will take time to perfect. Old notions that run contrary to effective cooperative learning are likely to persist. These notions and accompanying behaviors represent habits that teachers and supervisors will need to unlearn while learning the ways of appropriate cooperative learning. Old habits are hard to break—much less forget; teachers wanting to use cooperative learning need to accept at the start that creating effective cooperative learning classrooms will be challenging work. They will find, however, that the positive results for both students and themselves make the effort and time spent worthwhile (Johnson et al. 1984).

(10) *Cooperative learning will work when only one teacher in the school or department is using it.* Sometimes teachers have a sense that if they are the only one using cooperative learning their students will not gain much by its use. Consequently, they may try a few cooperative learning activities waiting for the day every teacher uses them. Cooperative learning has been effective in achieving many of the valued goals of social studies education. Social studies teachers should consider its use on the basis of the classroom evidence. We would encourage teachers to become the first cooperative learning teacher in their departments or schools. With the success that is likely to follow, colleagues will join this movement toward expanding the cooperative learning concept and accompanying strategies to other students and into other classrooms.

In this section we addressed a number of fundamental conceptions of appropriate cooperative learning along with a sample of misconceptions to overcome. Educators need to include these ideas as a part of a large, comprehensive, conceptual framework for cooperative learning. Social studies educators may read these and other materials on cooperative learning and believe that they are already engaged in cooperative learning in their school or classroom. The section that follows should help teachers begin a systematic assessment of current group instructional practices to determine the extent to which they are already practicing cooperative learning.

Am I Engaged in Cooperative Learning?

Teachers who use groups and supervisors who promote group work might perceive that they are already engaged in cooperative learning in the classroom. Numerous criteria and guidelines are available to verify whether what occurs within these groups meets the requirements for appropriate cooperative learning groups (e.g., Aronson et al. 1978; Cohen 1986; Johnson and Johnson 1991; Johnson et al. 1984; Kagan 1989; Slavin 1983, 1990; Stahl 1992). One way to determine whether cooperative learning is occurring is to observe how closely students follow these structures and requirements. To the extent that all group members meet these requirements, appropriate cooperative learning activity is occurring.

Another way to determine whether group activities and assignments are consistent with appropriate cooperative learning is by collecting systematic, objective data about the effects of cooperative learning on the majority of students compared to expected student outcomes of cooperative learning. For instance, most students involved in cooperative group tasks *over an extended period* should

- improve scores on academic tests
- voluntarily increase their personal contact with other students in a variety of contexts
- have strong feelings of group membership

- work cooperatively in small group settings toward attaining a common goal
- have many of the positive attitudes necessary for working effectively with others
- feel positively about others in their groups
- be willing to share and interact positively within group settings
- integrate their academic learning and social and intergroup relations
- improve relations with individuals from ethnic or racial groups other than their own
- be willing to express and discuss their own ideas in public
- improve their opinions about and relationships with handicapped students
- see their peers in a positive light
- increase the number of voluntary friendships based on human qualities
- have enhanced positive self-concept and self-esteem
- be positively adjusted psychologically
- have high levels of intrinsic motivation to learn
- accept their peers as knowledgeable agents in learning, i.e., as learning resources
- have proficiency in critical reasoning abilities and strategies
- reduce disruptive behaviors and increase on-task behaviors
- increase the amount of time they spend on-task
- have positive attitudes toward teachers, principals, and other school personnel
- have positive attitudes toward learning, school, and the subject matter content

Not all cooperative learning groups, whether lasting one class period, one week, or one month, will generate all of these results every time. Rather, these are results that are likely to occur when such learning groups function *over an extended period of time*. If the group structure and activities being used are *not* making noticeable progress along many of these lines by the end of the first semester, for instance, then teachers should reassess the extent to which they are actually engaging students in cooperative learning.

The list is also relevant for teachers not using groups or using groups only sparingly over the course of a school year. If teachers and their students are not achieving the results listed above from the strategies, resources, and activities they are using, they should seriously consider cooperative learning group strategies.

An Invitation

We invite social studies educators to study and reflect upon the information in these chapters. We invite them to acquire a conception of appropriate cooperative learning and to envision how they might use these strategies and guidelines in their classrooms. We invite educators to arrange for face-to-face communication with colleagues in their department, district, conference session, or college classroom to review this information and develop this vision cooperatively. Taking such steps should encourage social studies educators to work collaboratively and cooperatively to increase the effectiveness of cooperative learning groups in their classrooms. Finally, we invite social studies educators to ensure their social studies classroom activities facilitate *successful social study* via appropriate cooperative learning structures. When these are done, the evidence suggests that students can and will "get better together."

Notes

[1]The motto "Getting Better Together" orginated with Jim Weyand, former principal of Bill Reed Junior High School in Loveland, Colorado. A most remarkable educator, Jim invented and used many of the concepts and principles of cooperative learning with his faculty and staff beginning in the early 1970s to build and maintain cooperatively one of the most powerful, effective, and collegial instructional staffs one author, Robert Stahl, has personally encountered. Jim's genuine concern for students and student success evolved into a collegial team whose members, by working as a staff development cooperative learning team, "got better together" to enable students to achieve remarkable levels of academic, affective, and social abilities.

[2]Introductory descriptions of a number of cooperative learning models are available in the works referenced at the end of these chapters.

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Chapter 2 Two

From "Academic Strangers" to Successful Members of a Cooperative Learning Group: An Inside-the-Learner Perspective

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Students typically enter K–12 classrooms as individuals, independent and primarily alone as learners, although perhaps not alone in the nonacademic aspects of their lives. They expect to complete the bulk of their academic learning alone and to receive rewards or grades based on their accomplishments.

Although students occasionally work on joint projects, they usually work independently of peers. Students may copy homework, make sure another knows the assignment to be completed, or check their answers with those of their peers. As these interactions occur, we might overhear statements such as: "This is the correct answer to this question," "This is the way I solved this problem," and "Here's where I found this answer." Sometimes they decide to divide the work. Each completes a separate part and then they put the parts together into a final report or project. In other cases they may spend time helping one another while estimating the extent to which they may be endangering their own chances for success. If helping others threatens personal success, students typically withdraw to complete their work alone.

Cooperative situations such as these are almost exclusively oriented toward completing a task, which is the main purpose of assignments and the single-minded goal of nearly every student. One student's comment, "Right or wrong, it's done," expresses this view well. Students sense that the purpose of group assignments is to generate an acceptable product regardless of what they learn or do not learn in the process. In these situations, teachers find far too few opportunities to provide the individualized attention each student may need. Within traditional groups, students often place little emphasis on ensuring that they learn or comprehend what the group studies. They sense that they are accountable for completing their respective parts rather than achieving the project's full range of instructional outcome objectives.

Many students are academic loners, if not academic strangers, in the midst of other students acting essentially the same way. Although some may be social peers to others, few are perceived that way and even fewer are perceived as academic resources. Indeed, students depend on nearly everything *except* other students as resources for learning. They may have come to devalue the knowledge and support of classmates because of the risk of being wrong themselves. Furthermore, without the knowledge, the ability, and practice in how to work and cooperate with others toward ensuring the success of all, the chances are great that the group's efforts will not attain the group or individual success intended.

The social setting of learning activities and the social processes involved within learning environments play powerful roles in student academic and social activities. For one thing, the learning activities are social in that the very words and language rules used are part and parcel of the culture(s) in which students live. As Bruner (1986) recognized, most learning in most settings by nearly every person occurs as a communal activity, as a sharing of the culture. Students must make knowledge their own, but they must accomplish this in a community of those who influence and share their environment. Within classroom settings, students share, negotiate, and revise meanings in light of the responses of others. These responses occur whether or not direct interaction takes place among students (or between students and the teacher) on academic content, social interaction skills, and affective concerns. Students also make inferences about the range of relationships and interactions they may have with others in the same classroom. Consequently, many students infer that although their classmates may be called upon to help them complete projects, they themselves are not sources for helping their peers learn the content and abilities aligned with these projects.

What It Is Like to Be an Academic Stranger: A First-Person Scenario

The following scenario illustrates a student's perspective on what it means to be an "academic loner" or an "academic stranger" to one's peers.

Student as an Academic Loner

In my social studies classroom, I learn mostly by working by myself to complete assignments. Nearly all my efforts to learn the content and abilities expected are done alone. I engage in most tasks independently of what all other students in my class are doing or achieving. What I do and how well I do it are essentially unrelated to the accomplishments of others. The rewards and grades I receive are my own based solely on what I have accomplished. In most instances, my success, or lack of success, has no bearing on the rewards and grades others receive (Johnson et al. 1984; Johnson, Johnson, and Holubec 1990).

At times, working as an individual is a positive experience with worthwhile academic and personal benefits. In these situations I have the chance to learn about things in which I am personally interested. I even learn new abilities that enable me to do things I have always wanted to do. Most of the time, however, I have to work toward learning knowledge and abilities that are not consistent with my interests. Even my teacher likes some topics a great deal and has little interest in other topics we are supposed to study. Having to focus on subject matter content and tasks is not necessarily bad; this focus just usually does not match my preferences. I would like to study social studies if I could find topics meaningful and be successful in my efforts.

The classroom routines are set up for me to work most of the time essentially alone next to others who are also working alone. Therefore, I rely heavily upon my teacher and the textbook to provide most of the information I am expected to learn. My teacher's assignments often stress completing certain projects such as reading the chapter, completing worksheets, or solving problems. What I really have to learn in order to be highly successful is often not clear until we have a test. In other words, I find myself being informed as to what I am to do rather than what I am to learn. For instance, I might be directed to complete a worksheet on the material in a chapter, draw a figure of a Pilgrim on the class mural before Thanksgiving, or write a short essay on my reaction to some past or current event.

When I am done with my assignments, I usually think I understand the material even though I later find out all or a portion of my ideas and conceptions are inaccurate and incomplete. If my personal understandings make sense to me, then, like all people, I continue to treat my versions of the material and events as being correct until I decide I have to revise them. I depend entirely upon my teacher to tell me when and where I need help and to supply positive feedback when I succeed or make progress.

My classmates who fall behind in their work need more direct and frequent help to learn what all of us are expected to learn. Unfortunately, my teacher usually discovers this at a time when the entire class is moving on to new topics or content. When students sense that they are too far behind, that effort and time spent learning will not enable them to catch up, and that they will not get the help they need, they usually stop paying attention, spending time, and exerting effort to learn what is expected. As one student said, "If I know I'm going to fail no matter how hard I try, why bother trying?"

Competition: For Me to Win, Someone Else Has to Fail

For me, competition exists when I find myself striving to achieve something that is available in such limited quantities that not everyone can attain it regardless of what they do. For instance, in a basketball tournament, only one team can become champion; all teams compete against each other to achieve something (first place) that from the start everyone knows not all the teams can reach. In the classroom, when the rewards are limited to only a few, no matter how hard I work or how much I learn, competition exists although my teacher may not think it does.

My teacher creates a competitive environment by limiting the number of rewards, such as A grades, that will be given out for a particular test or at the end of the course. If my teacher believes that having too many students receive A grades is a sign of low standards, then limiting the rewards we may earn keeps the number of high grades at an acceptable level. For each student in my class who earns the highest reward, at least one other student cannot be allowed to be as successful. This competitive situation exists mostly for those students who strive to achieve the few high rewards available. Those who choose to compete realize from the start that not all of them will be allowed to make A grades. Many students, however, choose not to compete.

Even whole-class question-and-answer sessions are often competitive (Kagan 1989–90). We compete for the teacher's attention and praise as individuals operating independently of all others in the class. When the teacher selects me and I answer correctly, all others lose the chance to answer and be praised. In order for others to be praised, the first student selected must answer incorrectly or incompletely—that is, my chances for attention and praise depend upon the failure of my classmates. Most of my teachers are not aware that cer-

tain whole-class discussion behaviors generate competition. Many of these behaviors discourage our participation and, hence, our achievement. One obvious sign of this effect is that fewer and fewer of my classmates vie to answer questions as the school year progresses. Unfortunately, traditional classroom learning environments are rarely structured to enable most of us to become active *and successful* participants (e.g., Kagan 1989–90, 1990).

Teachers who begin the year opposing the notion of competition may resort to it out of frustration or desperation as many of their students continue to score low on tests, fall behind, and become increasingly apathetic. The teacher may add friendly competition for limited rewards to entice us to participate and exert the effort necessary to succeed on particular tasks. We sometimes even play our own versions of "Jeopardy!," "Family Feud," or "Twenty Questions," as a means to have fun and change our classroom routine. Students often leave these contests or games being perceived as winners or losers in the class. The excitement of the contest passes quickly, but once the winners are revealed, everyone lives with the knowledge they have of the success or failure of every student involved.

Consequently, competitive activities sometimes make us resist involvement, learning, and success in future activities. As the ranking of students' abilities becomes public and clear, these competitive activities tend to widen the existing differences among students' academic knowledge and abilities, which in turn widen negative perceptions of others on the basis of their gender, race, or ethnicity. In effect, by sorting students into "winners" and "losers," competition perpetuates conditions in which nearly all students lose in terms of what they could have potentially achieved.

In all these activities I continue to see myself as an academic stranger to my classmates and to be perceived by them as a stranger, even a threat, to their academic growth and success.

Our Work in Groups Rather Than as Groups

Working in groups and completing group assignments are often part of my social studies course. These groups are rarely more than collections of students who sit together, complete essentially independent tasks, and fit their individual parts together so they have a single product as proof of their cooperative effort. In these instances, students primarily work *in* groups rather than *as* groups. I work near other members of my group instead of with them as part of a team of learners. In such situations, the frequency, quantity, and quality of our interactions are low and the achievement for all is lower than it should be considering the time spent. Often we do not even participate in face-to-face interaction.

When we work in these groups, a number of roles emerge that reinforce the notion that we are to work in our groups primarily to finish the assignment. The "divvy-uppers" ensure that the assignment is divvied up into parts with each person assigned to a part. The "lookouts" position themselves to survey the room to let us know when the teacher is approaching and when certain limited resources, such as atlases and dictionaries, are available. The "get-it-doners" are those that make sure at least some of us stay on task to get the assignment done. These students may even do the work of others just to get a project finished. The "put-it-togetherers" emerge as we need to assemble the different parts, make them fit, and make up the transitions, introduction, and ending. They do the polishing off work. There may even emerge one or more "bail-outers." These students will work along with the others at the beginning, but will essentially drop out of the group and go it alone if they sense that staying with the group's effort will be bad for their grades or rewards. In some emergency cases, these students will do nearly the entire assignment themselves and put everyone's name on it just to prevent adverse consequences.

Rarely do we spend time making sure that all are learning the material as well as they can. I sometimes learn a lot from my groupmates, and they may learn something from me. Both of these are unpredictable by-products of nearly all group work in my class. At the same time we do not seem to learn much about how a group is supposed to work. Each group operates according to the personalities of the people involved rather than according to guidelines about ways we need to think and act as a group and within a group.

Even here, in the midst of my classmates, the perception persists among us that we are strangers rather than resources for each other's learning.

Of course, the above scenario does not hold for every student in every group in every class. Its purpose is to illustrate a perspective that is not always considered as teachers make decisions about individual and group assignments. A large part of this scenario was abstracted from the literature on cooperative learning, especially as it has been contrasted with individual and typical group strategies.

Cooperative learning advocates reject the notion that students remain "academic strangers" to one another and stress the important ways that each student can play a role in the academic success of other students. Cooperative learning groups lead to group success that

can be accomplished only by the personal achievement of each group member.

Student as an Academic Colleague

This section describes the perspective of students in social studies classrooms using appropriate cooperative learning structures and guidelines. A hypothetical student's perspective is offered as a contrast to the previous scenario of student life in many noncooperative classroom settings.

Students as Cooperative Learning Team Members: No Longer Academic Strangers

In my social studies classroom, we work in groups and have group tasks to complete. These groups, however, are not like most of the groups I have worked in before; they are different in a number of ways. Although our teacher places us in groups to learn social studies content and abilities, I have noticed that a number of features occur each time we form groups.

Each group is as *heterogeneous as possible*, according to gender, ethnicity, race, and knowledge and ability levels (Kagan 1990; Johnson et al. 1984; Slavin 1989, 1990, 1991). This mixture ensures that I come in close contact with and actively interact with everyone in the class, including students other than those from my own gender, race, or ethnic background. With these groups functioning as they do, I have revised a number of perceptions of these students and what they can achieve as well as what they can contribute to my success.

The teacher and students set *clear, specific individual and group goals* (Johnson et al. 1984; Slavin 1990, 1991). From the start, each group and each group member has a clear notion of exactly what is to be learned and what evidence beyond the group activities is required to verify that we have attained and maintained the established learning goals. Unlike some classes where a group might be assigned to complete a project or worksheet, my teacher's group assignments require that we learn the information and abilities that the assignment represents. I learned early that having a good-looking group report was not sufficient; all of us had to learn what was in the report. None of us was accustomed to that expectation.

We also found that not only was the group responsible for completing the learning task as a group but each of us was also held *individually accountable* for the learning (Johnson et al. 1984; Slavin 1989, 1990). Not only was each group responsible for learning the assigned information and abilities, the teacher also tested and assessed each of us to determine the extent of our personal success. I not only had to complete the work in the group, I had to learn to the best of my ability and help each of my groupmates to learn as well. We found we could no longer hide behind the group project without learning all the material and abilities ourselves. I get a grade for my personal achievement within and as a result of these groups.

What really helps is that the teacher provides worthwhile *group rewards* (Slavin 1989, 1990; Johnson, Johnson, and Holubec 1990). When the results of the group's efforts and achievement are good enough, the teacher rewards all members of the group on the basis of the group members' individual achievement. Sometimes the reward is more points added to all of our grades. We know, however, that we must meet the teacher's high expectations for all of us to get the best rewards. I also realize that the teacher wants all of us to learn the material well, so in nearly every case each group can earn the highest reward only when its members collectively achieve at the level expected.

In order to achieve our learning goals, the structure of the group work is such that a *division of required individual tasks* is necessary. My teacher provides clear guidelines to ensure that we all have separate tasks to complete successfully as an integral part of the final group goal. When necessary, my teacher takes time from classroom activities to help each of us with comprehending and refining our individual tasks. From the start it is not a guessing game for us. Besides, the earlier I know exactly what I need to do to help the group succeed, the sooner I can get to work and achieve what is necessary.

A *positive interdependence among group members* emerges (Johnson and Johnson 1989). My groupmates and I quickly realize that we need the help of others. Every one of us eventually accepts the responsibility for our own learning and achievement and for the learning and achievement of all group members. This interdependence is necessary for us to function as a group. It is vital for us to attain our group goal collectively. The group guidelines ensure as much as possible that each of us is dependent upon all other group members for all of us to achieve our group and individual goals.

An extensive amount of *face-to-face interaction* is necessary for us to work and succeed as a group (Johnson and Johnson 1989). Each time our group meets, I try to engage in direct and continuing face-to-face dialogues with my groupmates as we share and consider our knowledge and abilities and check our own learning. We arrange our chairs and desks so that this face-to-face dialogue can occur. This interaction works to ensure that all group members learn the required information and

abilities, complete the shared assignment, and achieve the academic goals.

As we work together in these structured ways, we learn *civility attitudes and abilities* (Casteel 1990). We are acquiring, refining, and using perspectives and behaviors that will enable each of us to be effective members of the social community and culture of the group. In order to establish and maintain a civil environment for our group interactions and work, we communicate as clearly as possible; resolve disagreements through compromise, persuasion, and negotiation; share knowledge, abilities, and self; and facilitate completion of group subtasks (Johnson and Johnson 1989). Instead of dreading coming to class each day, I find that the class is socially attractive, encouraging, and powerful.

My teacher helps us to describe, practice, and refine the many *group-processing abilities* necessary for our groups to function well. These processing abilities are also important in other groups in which I participate outside of class. Like each group member, I am expected to assume various roles. These roles include but are not limited to those of recorder, encourager, checker, leader, and reader. Eventually I will have to play all these roles. I am learning how to carry out these roles in addition to learning my social studies material. My teacher tells us that these roles and those associated with being civil contribute to the social study part of social studies.

I sense that when we operate in these groups the way they are supposed to work, every student in the class, especially in my group, has an *equal opportunity for success* (Slavin 1989). My teacher uses guidelines so that our cooperative learning groups establish conditions that allow each student to be as successful as any other student in the group and in the class as a whole.

I have been especially pleased with these group assignments because the teacher allows sufficient *time for learning* what each of us needs. In most cases, my teacher allows each student and each group enough time to learn the required information and abilities. When we do not have enough time to learn, the academic and other benefits of our social study using cooperative learning groups are limited (Johnson, Johnson, and Holubec 1990; see also, for example, Carroll 1989; Dempster 1988, 1991; Stahl 1989; in press). Since my teacher began using cooperative learning groups, we get and stay with assignments for extended periods of time. As a result, my teacher gives us more time to complete our group work. The end result is that more of us learn more than when less time was allowed for group work.

Once the groups complete their work, our teacher takes time to announce publicly the groups' achievement and *the rewards* to be distributed to those that attain or surpass the high standards established before the groups began their work. This is an exciting time for us, especially since the number of groups whose members succeed is so high.

When we are finished with our group work, my teacher often takes the time to help us *reflect on our group-processing abilities* (Johnson and Johnson 1989). As an individual and as a group member, I am asked to stop periodically to reflect upon and assess my own and the group's operations, interactions, and progress. I am then asked to decide how I might improve my interpersonal and group-processing abilities to increase the effectiveness of the group as a learning team.

As with the first scenario, this description does not hold for every student in every classroom in every situation. When teachers use cooperative learning groups appropriately over an extended period of time, a perspective like that described above can become prevalent among students. As depicted here, when teachers use cooperative learning, students are not allowed to be "academic loners" and to remain "academic strangers" to one another.

Ultimately, working in cooperative learning groups produces many positive results because they enable students to gain access to and complete many of the internal processing tasks they need to complete to be highly successful. The next section introduces three critical elements for individual learner achievement that appropriate cooperative learning groups provide.

What Each Student Needs to Be a Successful Learner: An Inside-the-Learner Perspective

Much of the cooperative learning literature and many training sessions focus on teacher and student requirements to work effectively in groups as learning teams. We would expect that when teachers implement the selected structure and guidelines, the benefits of cooperative learning will result. Unless the individual and group activities enable students to gain internally what each needs to be academically successful, however, the benefits will not occur no matter how much effort students exert. Social studies educators need an adequate conception of students' needs from an inside-the-learner perspective to complement their notions of what they need to provide outside the learner in the form of cooperative learning guidelines and group goals.

The Student as Learner

Students are dynamic, active information processors who continually generate, construct, revise, apply, test, and assess their personal understandings of the world,

themselves, and their experiences (Stahl 1989). Students ultimately decide individually which events, materials, and data they will attend to and how each infobit[1] will be made meaningful and be related to other infobits. Students invent or construct meaning and make sense of what they encounter by using previously acquired information to act upon and manipulate newly encountered information. The already acquired sets of information constitute both knowledge and "prior knowledge" at a particular moment. The results of these inventing, sense-making, and meaning-making activities are labeled constructs, conceptions, worldviews, perspectives, and infoschemata.[2]

Each student also decides, almost always unconsciously, how permanently stored information will be used to make sense of and assign meaning to newly encountered material and data. The student even decides whether something is a problem or is worthy of further attention. All individuals assign personal meaning to the external information and events they encounter and perceive to exist as well as to all information and conceptions they generate internally. This meaning and this meaning alone influences personal judgments. The meanings, perceptions, conceptions, and results of sense-making decisions may be either stored permanently in the brain or forgotten, sometimes within seconds.

This view of students reveals that their brains do not operate as sponges that absorb external information—such information cannot be directly transferred into someone's brain as if it were a video recorder. Essentially, from the moment a student encounters an external event or material, a series of high-speed decisions that assign personal meaning to what is encountered is begun. The result is a version of what the student thinks occurred or thinks the material says from his or her own point of view. This meaning may be, and often is, different in intent, content, and form from that of the teacher or textbook. Unless the student reflects upon and reassesses the meanings initially assigned to the information, that version of the event or material will be considered an accurate and complete representation. Students, like their teachers, use their invented versions as a base to make sense of other materials they encounter within and outside the classroom. In far too many instances students construct inadequate versions of what they encounter in social studies classes as they strive to achieve the selected instructional outcome objectives.

If students are to achieve established social studies goals, they must eventually construct sets of organized and meaningful information aligned with each goal. This information serves as requisite knowledge to guide decisions and actions consistent with the selected goals. In addition, students should be able to use this information when needed in the form of academic, social, and affective abilities. Another way of viewing what each student needs to be a successful learner is through a model of learning in school settings that emphasizes what the student needs rather than what the teacher needs to provide or do.

A Model of School Learning

In educational settings *learning* may be defined as acquiring new information or new abilities to use information such that the information or ability is accessible to the person twenty-three or more hours beyond the class period in which the information or ability was first encountered or used (Stahl 1989; in press).[3] Learning involves a series of internal information-processing events that each person must complete to transfer the new information or ability into permanent storage. Essentially, learning involves making one or more changes both in the existing knowledge housed in permanent storage and in the ability to use this knowledge at some future time. Given this definition, the teacher and student alike cannot confirm what has been learned until approximately twenty-three or more hours *after* a class period has ended.

Therefore, just because students are active, having fun, and appear to be learning something new does not mean that what they are thinking about or doing during that same class period has been or will be learned. Ample evidence from numerous research studies and from teachers' classroom experiences verify that students frequently forget much of what they appear to have learned quite well on a previous day.

In addition, social studies educators should not assume that the processing associated with learning guarantees that what is learned, as determined by the learner or some external standard, is correct, complete, appropriate, or relevant to a task, an expected ability, or a future need. Even the individual learner cannot guarantee that certain information, conceptions, or abilities will be stored permanently. Nor can the learner guarantee that what is stored will be accurate or will be retrieved when needed.

The elements that determine the extent of learning success can be expressed in the following way:

$$\text{Degree of Success} = f\left[\frac{\text{relevant infobits possessed and able to be used at the moment}}{\text{relevant infobits required}} \times \frac{\text{appropriate internal processing events completed up to that moment}}{\text{appropriate internal processing events needed to be completed}} \times \frac{\text{actual productive time already spent learning}}{\text{actual productive time needed to be spent learning}}\right]$$

As this equation suggests, the three critical elements necessary for successful learning are, in abbreviated form, (a) appropriate and sufficient information, (b) appropriate and sufficient internal processing events completed

and possible to complete, and (c) sufficient productive time spent learning (Stahl 1989, in press). The information one needs depends upon the particular ability to be learned and the level of success one wishes to achieve. For instance, to be competent inquirers students will need information different from that needed to be skilled at applying a concept to distinguish between examples and nonexamples. Processing events refer to how the learner considers, manipulates, and uses information. Processing events include but are not limited to paraphrasing, organizing, interpreting, forming associations, and applying information. The time-spent element refers to the actual number of minutes, hours, days, weeks, and months each student must spend to achieve the desired level of success.

All three elements are interrelated and interdependent; none is considered the most important in its own right. For instance, to place high value on having students process information without having them acquire and process information directly aligned with the goal, or without having students spend sufficient time to complete the processing, will not enable them to be as successful as the teacher desires. Social studies teachers will, therefore, want to provide students opportunities to attain 100 percent of what each student needs of each of these three elements for every ability to be learned.

Returning to the formula noted earlier, the degree of success for every ability can range from 0 to 100 percent, with 100 percent representing the highest level of achievement that is acceptable at a particular moment. The higher the expected level of achievement, the more each of these three elements will be required. The three elements within the parentheses reflect ratios, not fractions. The bottom section for each is always 100 percent of what is needed for a particular level of success. The top section of each ratio may range from 0 to 100 percent. To be 100 percent successful, the top of each variable ratio must always be 100 percent. To the extent that any one or more of these elements is below 100 percent of what is needed, the learner will be less successful than if all three were completely fulfilled. Desire and effort cannot replace what is needed in each of these three critical elements.

For any ability, an overabundance in one element will never compensate for less than 100 percent of what the learner needs in one or both other elements. For instance, giving students more time without access to the critical information they need will not make up for the information, no matter how long a period of time they are allowed. Similarly, having students encounter information they must learn without the opportunities to process the information in appropriate ways will not lead to the learning teachers may expect. The requirements for the bottom section of each ratio will vary from one ability to another and will likely vary from one student to another. At the beginning of instruction, students in a single classroom will likely vary in the extent to which they approach 100 percent for each of the three variables (Stahl 1989; in press).[4]

Implications for Social Studies Education

Social studies instruction will be effective to the extent that it provides students access to the appropriate information, processing, and time they need in order to be successful. Invariably, students will differ in the quantity and quality of what they have and what they need to be successful from each of the three critical elements. In addition to the academic content and abilities to be learned, learners also need descriptive and supportive feedback on the extent to which they are actually acquiring the infobits and abilities required for the achievement level expected. To the extent that such feedback is not provided or allowed, the instructional environment will always be less than optimally effective no matter how good the model, the method, or the teacher appears to be. Conversely, no teaching model will be optimally effective if its implementation limits students' fulfillment of the three elemental areas required for learning.

Appropriate Cooperative Learning Provides Students Access to What They Need to Be Successful

Cooperative learning models provide students with many opportunities to gain access to the information they need, to complete the processing they need to complete, and to spend extended on-task time learning in direct alignment with the social studies goals selected. By building a community of learners, on-task cooperative groups serve to (a) increase the relevant information that would otherwise be available to a single person, (b) provide and support alternative versions and perspectives of what they are studying, (c) help students complete appropriate internal information processing, (d) increase the use of self-regulatory abilities to stay focused, (e) monitor students' thinking and actions such that correction and reinforcement will be more immediate, frequent, and constructive, and (f) verify students' ideas and abilities within moments after being expressed. When students work as groups to facilitate each other's learning, each student has engaged time to learn information and abilities associated with the goals. In addition, the social interaction allows thinking and its results to take a somewhat public, therefore observable, form. As students talk, their peers, the teacher, and the students themselves can attend to these public statements to assess the content, meanings, and applications of their thinking. The second scenario presented earlier illustrates how cooperative learning groups tend to provide more students with improved access to what they need to learn effectively.

Epilogue

This chapter stresses learning and achievement within the social studies classroom from an inside-the-learner perspective. It provides a conceptual framework of the student as learner to complement the teacher and student activity framework that the literature on cooperative learning emphasizes. One value of this perspective is that it helps the social studies educator consider what needs to occur within and around students during effective instructional strategies such as cooperative learning.

Notes

[1]*Infobit* (plural, *infobits*) is a term coined by the author in 1983 to denote any piece or bit of information or data.

[2]*Infoschemata* (singular, *infoschema*) is a term used to label the organized clusters of interrelated information learners construct, store, and use as their "prior knowledge." More details on infoschemata and other aspects of this position are available elsewhere (e.g., Stahl 1989, in press).

[3]This definition is proposed as a viable one for distinguishing among learning, what is learned, and what is forgotten *in school settings* (also see Stahl, in press).

[4]See, for example, Bloom (1976), Carroll (1989), and Dempster (1988, 1991) for a similar claim pertaining only to the time variable.

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Chapter 3 Three

Cooperative Learning, Properly Implemented, Works: Evidence from Research in Classrooms

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Cooperative learning is a research and development success story. Scores of educational research and evaluation projects document the instructional effectiveness of cooperative learning with students in classrooms. These research and evaluation efforts also have contributed to the refinement of various cooperative learning techniques. Furthermore, inquiry into cooperative learning has clarified the general conditions under which educators can reasonably expect their students to engage in productive, cooperative work in settings outside particular cooperative learning group strategies. Consequently, social studies teachers have a considerable knowledge base on which to decide (a) whether to use cooperative learning techniques, (b) which techniques to try, and (c) how properly to implement the cooperative learning approach(es) they select.

In the form of a conversation between a teacher and a cooperative learning advocate, this chapter reviews research on cooperative learning with the practical considerations of a teacher foremost.

TEACHER: If I use small-group cooperative learning techniques to teach my students, can I expect my students to learn more historical and social scientific knowledge than they do with conventional whole-class and individual seatwork instructional procedures?

ADVOCATE: In general, the answer is yes. Many research projects have been conducted to study the effects of cooperative learning techniques on academic achievement in middle school and high school classrooms. The findings of most of those studies support the claim that cooperation usually produces higher levels of student achievement than competitive and individualistic instructional activities. The academic effectiveness of cooperative learning varies, however, with the specific techniques selected and how well the teacher and students implement the techniques.

T: If I try cooperative learning, I want to use the best technique. In terms of students' academic achievement, which cooperative learning technique is the most effective?

A: Data are available for comparing several cooperative learning techniques. Please be cautious. Selecting the "best" technique requires more criteria than just a comparison of each technique's overall achievement effects. Nevertheless, having information about the academic achievement results of a particular technique is valuable.

Slavin (1990) recently explored the effects of the various cooperative learning techniques on students' achievement by reviewing sixty-eight school-based experiments that compared cooperative learning with other methods. He examined existing research on the following techniques: Student Teams-Achievement Divisions, Teams-Games-Tournament, Team-Assisted Instruction, Cooperative Integrated Reading and Composition, Learning Together, Jigsaw, and Group Investigation. He also reviewed a handful of studies focused on other, lesser-known techniques. Taken together, the cooperative learning techniques produced superior academic achievement in 72 percent of the experiments; only 12 percent showed superior effects for the noncooperative comparison instruction.

Slavin's examination also allows a comparison of the effectiveness of the cooperative learning techniques reviewed in the sixty-eight experiments. Student Teams-Achievement Divisions demonstrated superior achievement effects in 86 percent of the studies (18 of 21). Teams-Games-Tournament demonstrated superior effects in 75 percent of the studies (9 of 12). Team-Assisted Instruction and Cooperative Integrated Reading and Composition each showed superior effects in 100 percent of the studies (i.e., Team-Assisted Instruction in 5 of 5, and Cooperative Integrated Reading and Composition in 7 of 7). Learning Together demonstrated superior results in 56 percent of its studies (5 of 9). Jigsaw achieved superiority in only 25 percent of the studies (2 of 8). Group Investigation produced superior effects in 60 percent of the studies (3 of 5).

T: It looks like the research says Team-Assisted Instruction and Cooperative Integrated Reading and Composition are the best cooperative learning techniques followed by Student Teams-Achievement Divisions. Do you agree?

A: The research evidence does not tell us which are

the best techniques. Research reports are a source of information we must interpret in light of our educational goals and the realities of the environment in which we teach. Some of the techniques were developed to teach specific types of subject matter. Team-Assisted Instruction was designed to teach mathematics and Cooperative Integrated Reading and Composition was designed for language arts instruction; Student Teams-Achievement Divisions and Teams-Games-Tournament appear to work best with objectives focused on knowledge, comprehension, and application, but Group Investigation was designed for higher-cognitive learning. Academic achievement is an important learning outcome, but affective goals such as interpersonal relationships are also important.

T: I often feel suspicious of research. New techniques, for example, can show excellent results because students' motivational levels are high due to novelty and the special attention students receive in an experiment. Were these experiments conducted in laboratories or in schools under more or less real-life conditions?

A: Slavin reported that he selected the sixty-eight studies out of a considerably larger set of cooperative learning research reports. The sixty-eight studies satisfied the following conditions. First, they lasted at least twenty hours (i.e., four weeks of classes). This reduced the likelihood of attributing the results to novelty or motivation because of special attention. Second, students in the cooperative learning classes and in the comparison treatment classes studied the same material to achieve the same objectives; none used placebo treatments. Third, the studies provided evidence that students in both the cooperative and comparison classes were strikingly similar at the beginning of the study. This standard was met through either random assignment of students to classes or pretests that showed the groups to be similar. Finally, achievement tests assessed the same objectives in both instructional treatments. Nearly all the studies were conducted in school settings.

T: This research sounds good, but I have another question. People talk about *statistical* significance, but I am more concerned about *practical* significance. The difference between two groups of students could be statistically significant but the difference could be so small that it has no practical value. If I am going to try cooperative learning, I want to be sure I am aiming for an achievement effect that will justify the time and energy I must put into a new teaching approach. What evidence is there about the sizes of achievement effects?

A: Fortunately, evidence is available about magnitudes of effect. The concept of effect size will help us think about this question. In order to compare different studies using different tests, students, subject matter, and materials, it is helpful to examine how the distribution of student achievement scores in various instructional conditions differ. A number of effect size statistics exist, but one we can use tells us how the score distributions differ according to standard deviation units (Cohen 1977).

Slavin applied this effect size concept to the achievement results of fifty-one studies that provided enough data to compute effect sizes. Overall, the effect size was .21 standard deviation in favor of the cooperative learning techniques. Another way of stating the meaning of this statistic is that 58 percent of the students who participated in a cooperative learning treatment scored above the mean of students in the noncooperative treatments.

Of course, the effect sizes varied with the technique. In the Student Teams-Achievement Divisions studies, 61 percent of the experimental students scored above the comparison students. In the Teams-Games-Tournament studies, 65 percent of the experimental students scored above the mean of the comparison students. Following are the percentages of cooperative learning students who scored above the mean of the comparison students for the other cooperative learning techniques: Team-Assisted Instruction/Cooperative Integrated Reading and Composition, 58 percent above the mean; Learning Together, 50 percent; Jigsaw, 52 percent; and Group Investigation, 55 percent. Much variation in effect sizes exists between studies of the same technique; for example, Teams-Games-Tournament effect sizes varied from a low of 48 percent above the comparison group mean to 98 percent above.

If no difference existed between cooperative and noncooperative instruction, we would expect 50 percent of the cooperative learning students to be above the mean of the students in the noncooperative classes and vice versa. How large an effect must exist to be practical? The answer to that question depends on the return you expect for the time and energy you invest in learning to implement a new instructional approach. Given two classes of students having similar characteristics and studying the same subject with the same materials, how would you feel if a new instructional approach used in one class caused 58 percent of that group to score above the mean of the other group? If that sounds good, then the new instructional approach would be worthwhile if the time and energy required to implement it were reasonable. The size of effect you require will influence which cooperative learning techniques appeal to you.

T: Student Teams-Achievement Divisions and Teams-Games-Tournament still look good since more than 60 percent of the cooperative learning students scored above the mean of the comparison group students. Learning Together and Jigsaw show no superior achievement effect or only a tiny positive effect. Why would anyone bother with them if traditional teaching techniques are just as good?

A: One reason for considering them is that a number of desirable attitudinal, interpersonal, or behavioral outcomes might accrue that students do not achieve through more conventional instruction. The lack of a

practical, superior achievement effect, however, is puzzling. Mattingly and VanSickle (1991) were particularly curious about Jigsaw's apparent failure to produce student achievement superior to noncooperative instruction. They examined the Jigsaw experiments and discovered that nearly all used a form of Jigsaw that included neither rewards to groups nor individual accountability of students within groups.

Group rewards and individual accountability are major characteristics of Student Teams-Achievement Divisions, Teams-Games-Tournament, Team-Assisted Instruction, and Cooperative Integrated Reading and Composition. Slavin (1983) developed a form of Jigsaw, Jigsaw II, that implemented these two conditions. In Jigsaw II, each team of students receives a group reward determined by summing points each student earns as a result of individual achievement test scores. Mattingly and VanSickle conducted an experiment using Jigsaw II and observed a difference in favor of Jigsaw II with an effect size of .81 standard deviation; 79 percent of the Jigsaw II students scored above the mean of students who received the comparison instruction. Group rewards and individual accountability strengthened dramatically Jigsaw's academic effect.

Slavin (1990) reported that two of the Learning Together studies (Humphreys, Johnson, and Johnson 1982; Yager et al. 1985) showed statistically significant positive results. Both of those studies, unlike the studies Slavin reviewed, implemented Learning Together with individual accountability. Unfortunately, the two positive effect studies did not report data needed to compute effect sizes.

The absence of group rewards and individual accountability seems to solve the mystery regarding why Learning Together and Jigsaw did not show substantially stronger achievement effects in the studies reported by Slavin. Further analysis of Jigsaw and Learning Together supports Slavin's claim that cooperative learning techniques need both to provide group rewards and to hold individual students accountable for individual learning. Students' motivation to work toward academic goals in their learning teams is likely to be greater when their rewards are a function of their team performance and when their individual contributions to the team's performance are obvious to their teammates. More research is needed, but it appears that if Learning Together and Jigsaw are modified to meet these two criteria, then they are likely to produce the superior academic effects of Student Teams-Achievement Divisions, Teams-Games-Tournament, Team-Assisted Instruction, and Cooperative Integrated Reading and Composition.

T: I understand how the structure of cooperative learning groups can be important. The lack of group rewards and individual accountability also explains why many small-group activities I have tried have resulted in one or two students doing most of the work. One of the reasons less capable students might learn more in a cooperative learning class is that the more competent students help them to learn the material. Does that mean cooperative learning techniques should be used only in heterogeneous ability classes? Are they academically valuable in homogeneous ability classes? In low-ability classes?

A: We have little research on the effects of cooperative learning techniques in homogeneously grouped, low-ability classes. Allen and VanSickle (1984) used Student Teams-Achievement Divisions and compared a low-ability 9th grade class with a class using whole-class and individual seatwork activities. The mean IQ in each class was 75. The STAD students outscored the comparison students by 11.7 percent for an effect size of .94 standard deviation; 83 percent of the cooperative learning students scored above the mean of the comparison class. In light of the more general findings, Allen and VanSickle's study suggests that the motivational effect of the cooperative organization was strong enough to increase the learning effectiveness of the students in their study even in the absence of more capable students.

T: Do cooperative learning techniques work better with some types of students than others?

A: A few studies address the question of interaction between cooperative instructional treatments and student characteristics. According to Slavin (1981), Student Teams-Achievement Divisions and Teams-Games-Tournament work equally well in rural, suburban, and urban settings. Although both African-American and European-American students tend to perform at higher levels with cooperative instruction when compared to noncooperative instruction, African-American students tend to demonstrate a greater difference in favor of cooperative learning (Lucker et al. 1976; Slavin 1977; Slavin and Oickle 1981). In terms of high, average, and low achievers, those who benefit most from cooperative learning vary from study to study (Slavin 1981). One study (Wheeler 1977) reported that students who preferred to cooperate achieved higher scores through cooperative learning than students who preferred to compete. The reverse was true in competitively structured instruction. Given the few studies addressing student-treatment interactions, we must interpret these findings cautiously.

T: What kinds of affective outcomes do cooperative learning techniques produce?

A: Students in cooperative learning settings tend to develop more positive relationships with students of both similar and dissimilar ethnic backgrounds (Slavin 1990). In fact, a major motivation for developing Student Teams-Achievement Divisions and Teams-Games-Tournament was to improve race relations in desegregated schools. The benefits are generalizable, however, beyond African-American and European-American students in U.S. schools. Jigsaw II, for example, generated more cross-ethnic friendships among

native Anglo-Canadian students, West Indian immigrants, and European immigrants (Ziegler 1981). In Israel, Group Investigation and Student Teams-Achievement Divisions encouraged more positive cross-ethnic attitudes between Jewish students of Middle Eastern and European backgrounds (Sharan et al. 1984).

Academically handicapped students frequently are rejected by their nonhandicapped peers in mainstreamed classrooms. Cooperative learning techniques usually can help improve student relationships in this context as well. Madden and Slavin (1983) observed that nonhandicapped students in Student Teams-Achievement Divisions classes rejected academically handicapped students less often than in comparison classes. More positively, Team-Assisted Instruction produced more friendships as well as fewer rejections in another study (Slavin 1984). Other cooperative learning techniques (e.g., Learning Together) tend to create more positive relationships in class, but not out of class according to Ballard et al. (1977) and to a series of studies by Johnson and Johnson and their colleagues (cited in Slavin 1990). Studies by Slavin (1977) and Janke (1978) indicate that emotionally disturbed students' on-task behavior and peer interaction are better during and following experience with Student Teams-Achievement Divisions than with conventional teaching and learning techniques.

Other studies have been conducted to investigate the effects of cooperative learning techniques on other affective and behavioral outcomes including students' self-esteem, locus of control, time on task, classroom behavior, and enjoyment of class. Some of the research indicates that cooperative learning techniques promote positive attitudes and classroom behavior. The research results, however, are mixed, and clear conclusions are difficult to draw at this time.

T: It is clear that cooperative learning techniques provide opportunities for teachers to improve students' academic achievement and interpersonal relationships. What special benefits are there for social studies teachers who use cooperative learning techniques appropriately?

A: Given that social studies teachers want both to teach their students to be active, effective citizens and to promote democratic values, properly implemented cooperative learning techniques have much to offer. Teachers who want to promote democratic citizenship should attempt to have a classroom characterized by at least the following five values:

a. *Equal opportunity*—Each student has an equal opportunity to learn.
b. *Individual welfare*—The welfare of each individual is maximized.
c. *Meritocracy*—The system of rewards and penalties is responsive to and reflective of the quality of individual performance and achievement.
d. *Personal responsibility*—Each individual is held responsible for his or her effect on the welfare of others.
e. *Social responsibility*—Knowledge, skills, and attitudes are taught that promote the welfare of each individual, the class as a group, and the larger society in such a way that they in turn are likely to enhance each individual's welfare (VanSickle 1983).

Group rewards and individual accountability in cooperative learning promote both personal and social responsibility. The positive academic achievement effects of cooperative learning promote equal opportunity and individual welfare. The positive interpersonal relationships generated in cooperative learning classrooms promote individual welfare and personal responsibility. The opportunities to demonstrate competence, make contributions to team success, and be recognized for those contributions support individual welfare, meritocracy, and social responsibility. In these ways, cooperative learning can support the broad goals of the social studies curriculum.

Numerous classroom experiments show that cooperative learning techniques that provide group goals and rewards and hold students individually accountable for their learning are likely to produce higher academic achievement than noncooperative instruction. Research also indicates that cooperative learning often produces more positive student interpersonal attitudes and interactions and might foster other positive attitudes as well. Also, cooperative learning and its effects are consistent with the goals and values of teaching social studies (also see Stahl, 1992). Altogether, a great deal of evidence supports using cooperative learning techniques in social studies classes.

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Chapter 4 Four

Cooperative Learning in Social Studies: Balancing the *Social* and the *Studies**

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Cooperative learning has long been used in social studies. John Dewey's Project Method of the 1920s, primarily used in social studies, was certainly not the first proposal for the use of cooperative learning in this subject. In recent years teachers have used an astonishing variety of cooperative learning methods in social studies classrooms, and use of these methods is expanding rapidly.

Two broad reasons justify using cooperative learning. First, these methods enhance and deepen students' learning of the formal curriculum. Second, they help to accomplish affective goals. These include traditional affective goals of social studies such as commitment to civic values and empathy for other peoples in other cultures and eras. Other affective goals not unique to social studies are increased positive attitudes toward the subject, increased self-confidence in learning new content, improved relationships among students (particularly in race relations), friendly attitudes toward mainstreamed students, prosocial values, kindness and altruism toward others, and the ability to work productively with others.

Cooperative learning can indeed accomplish all of these academic, social, and affective goals. Simply allowing students to work together, however, is not enough. Experimental research in schools over the past twenty years has shown that the way teachers structure and implement cooperative learning methods affects the outcomes, especially achievement outcomes. Improvement in social studies must attend both to the *social* and to the *studies*. This chapter discusses research on the cooperative learning methods most often investigated and used in social studies with an eye toward describing key principles and components necessary to make cooperative learning approaches most effective for social and achievement goals.

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Cooperative Learning Methods

Dozens of specific cooperative learning methods are available with names and teachers' manuals or other how-to materials; hundreds of informal variations of these are available as well. The small number of strategies that have been empirically compared to traditionally taught control groups and applied in the teaching of social studies are briefly described below.

Student Teams-Achievement Divisions

In STAD (Slavin 1978, 1986), teachers assign students to four-member learning teams that are mixed by performance level, gender, and ethnicity. The teacher first presents a lesson and then students work within their teams to make sure that all team members have learned the lesson. Finally, all students take individual quizzes on the material without helping one another.

The teacher compares students' quiz scores to their past averages and awards points based on the degree to which students can meet or exceed their earlier individual performances. The teacher then adds these points to form team scores. Teams that meet certain preestablished criteria may earn certificates or other rewards. The whole cycle of activities, from teacher presentation to team practice to quiz, usually takes three to five class periods.

STAD has been used in a wide variety of subjects, from mathematics to language arts to social studies, and has been used from grade 2 through college. It is most appropriate for teaching well-defined objectives with single right answers, such as specific locational characteristics in geography and some map skills, knowledge of events in history, and principles of economics or government.

Teams-Games-Tournament

Teams-Games-Tournament (DeVries and Slavin 1978; Slavin 1986) was the first of the Johns Hopkins cooperative learning methods. It uses the same teacher presentation and teamwork as STAD, but replaces the quizzes with weekly tournaments in which students

compete with members of other teams to contribute points to their own team scores.

Jigsaw

Elliot Aronson and his colleagues (1978) originally designed Jigsaw. According to Aronson's Jigsaw method, teachers assign students to six-member teams to work on academic material that the teacher has broken down into sections. For example, a biography might be divided into early life, first accomplishments, major setbacks, later life, and influences on history. Each team member reads an assigned section. Next, members of different teams who have studied the same sections meet in expert groups to discuss their sections. Then students return to their original teams and take turns teaching their teammates about their respective sections of the material. Since the only way students can learn other sections is to listen carefully to their teammates, they are motivated to support and show interest in one another's work.

In Slavin's (1986) modification of Jigsaw, Jigsaw II, students work in four- or five-member teams as in TGT and STAD. Instead of each student being assigned a unique section, all students read a common narrative, such as a book chapter, a short story, or a biography. Each student then receives a subtopic related to this narrative on which to become an expert. Students with the same topics meet in expert groups to discuss them, after which they return to their original teams to teach what they have learned to their teammates. Students then take individual quizzes, which result in team scores based on the improvement score system of STAD. Teams that meet preset standards may earn certificates or other suitable rewards. Kagan (1989) has described many more variations of the basic Jigsaw format.

Learning Together

David and Roger Johnson (1987) developed the Learning Together model of cooperative learning at the University of Minnesota. The methods they have investigated involve students working in four- or five-member heterogeneous groups on assignment sheets. The groups hand in a single sheet and receive praise and rewards based on the group product. Their methods emphasize team-building activities before students begin working together as well as regular discussions within groups to assess how well they are working together.

Group Investigation

Group Investigation, refined by Shlomo Sharan at the University of Tel-Aviv (Sharan and Sharan 1976), is a general classroom organization plan in which students work in small groups using cooperative inquiry, group discussion, and cooperative planning and projects.[1] Using this method, students form groups of two to six members. After choosing subtopics from a unit being studied by the entire class, the groups break their subtopics further into individual tasks and carry out the activities necessary to enable the group collectively to prepare group reports. Each group then makes a presentation or display to communicate its findings to the entire class. Kagan (1989) has developed a modification of Group Investigation called Co-op Co-op.

Research on Cooperative Learning

Cooperative learning methods are among the most extensively evaluated alternatives to traditional instruction in use in schools today. More than seventy high-quality studies have evaluated various cooperative learning methods over periods of at least four weeks in regular elementary and secondary schools; sixty-seven of these studies have measured effects on student achievement (Slavin 1990). All of these studies compared effects of cooperative learning to those of traditionally taught control groups on measures of the same objectives pursued in all classes. Teachers and classes were either randomly assigned to cooperative or control conditions, or they were matched on pretest achievement level and other factors. Only a few of the studies involved social studies, but studies involving other subjects have clear implications for teaching social studies. The following selections review the research in general, and highlight studies in social studies classrooms.

Academic Achievement

Of sixty-seven studies on the achievement effects of cooperative learning, thirty-nine (58 percent) have found in the cooperative classes significantly greater achievement than in the control classes. Twenty-seven studies (40 percent) resulted in no differences. In only one study did a control group outperform the experimental group. The effects of cooperative learning, however, vary considerably according to the method used. Two elements must be present if cooperative learning is to be effective: group goals and individual accountability (Slavin 1990). That is, groups must be working to achieve some common preset goal or to earn rewards or recognition, and the success of the group must depend on the individual learning of each group member.

In studies of methods employing these two elements, effects on achievement have been consistently positive; thirty-seven out of forty-four such studies (84 percent) found significantly positive achievement effects. In contrast, only four of twenty-three studies (17 percent) of methods lacking group goals and individual accountability found positive effects on student achievement. Two of those four were studies of Group Investigation in Israel (Sharan et al. 1984; Sharan and Shachar 1988). In Group Investigation, students in each group are responsible for one unique part of the group's overall task, ensuring individual accountability. Even though no specific group rewards are used in the Group Investigation

method, the group evaluation appears to serve the same purpose.

Why are group goals and individual accountability so important? To understand this, consider the alternatives. In many forms of cooperative group activities, students work together to complete a single worksheet or to solve a single problem together. In such cases, there is little reason for more able students to take time to explain what is going on to the less able groupmates, to answer their questions, to help them succeed, or to ask their opinions. When the group task is merely to do or complete something, rather than to learn something, the participation of less able students may be seen as interference rather than help. It may be easier in these circumstances for students to give each other answers than to explain concepts or skills to one another until all students learn what is being studied.

In contrast, when the group's task is to ensure that every group member has learned something well, it is in the interest of every group member to spend time explaining concepts to their groupmates. Research by Webb (1985) on students' behaviors within cooperative groups has consistently found that the students who gain most from cooperative work are those who give and receive elaborated explanations. Webb found that giving and receiving answers without explanations, on the other hand, were negatively related to achievement gain. Clear group goals and individual accountability motivate students to offer explanations to each other and to take each other's learning seriously, instead of simply giving each other answers.

Cooperative learning methods generally work equally well for all types of students. Although occasional studies find particular advantages for high or low achievers, boys or girls, and so on, the great majority find equal benefits for all types of students. Some teachers are concerned that cooperative learning will hold back high achievers. The research provides absolutely no support for this claim; high achievers gain from cooperative learning (relative to high achievers in traditional classes) just as much as do low and average achievers (Slavin 1991).

Research on the achievement effects of cooperative learning has more often involved grades 3–9 than 10–12. Studies at the senior high level, however, are about as positive as those at earlier grade levels, but a need exists for more research at that level. Cooperative learning methods have been equally successful in urban, rural, and suburban schools, and with students of various ethnic groups (although a few studies have found particularly positive effects for African-American students; see, for example, Slavin and Oickle 1981).

The findings of research on cooperative learning in social studies have been similar to those in other disciplines. Allen and VanSickle (1984) found strong positive effects of STAD on achievement in 9th grade geography. DeVries, Edwards, and Wells (1974) found similar effects for TGT in grade 10–12 U.S. history classes. Yager, Johnson, Johnson, and Snider (1986) found that students in Learning Together classes learned and retained more from a unit on transportation than did students taught individually.

Group Investigation has been particularly effective in social studies. The most successful of the Group Investigation studies was an eighteen-week experiment involving Israeli 8th graders studying geography and history (Sharan and Shachar 1988).

Achievement effects of Jigsaw appear to depend on the form of the program used. Studies of the original Jigsaw model, including an Israeli study involving history (Rich, Amir, and Slavin 1986), have shown few achievement effects. Studies of Jigsaw II, which includes the group goal and individual accountability elements, however, have found positive achievement effects. These include two studies involving social studies classes. One, by Mattingly and VanSickle (1991), involved an integrated unit on Asia taught in a U.S. high school in Germany. The other took place in Toronto and involved units on the Inuit people and the history and geography of Newfoundland (Ziegler 1981).

Intergroup Relations

Research on cooperative learning methods has found consistent positive effects of cooperative learning on intergroup relations. In most of the research on intergroup relations, students were asked to list their best friends at the beginning of the study and again at the end. The number of friendship choices students made outside their own ethnic groups constituted the measure of intergroup relations. Positive effects on intergroup relations have been found for STAD, TGT, Jigsaw, Learning Together, and Group Investigation (Slavin 1985).

Two of these studies, one on STAD and one on Jigsaw II, included follow-ups of intergroup friendships several months after the end of the studies. Both found that students who had been in cooperative learning classes still named significantly more friends outside their own ethnic groups than did students who had been in control classes. Two studies of Group Investigation (Sharan et al. 1984; Sharan and Shachar 1988) found that students' improved attitudes and behaviors toward classmates of different ethnic backgrounds included classmates who had not shared cooperative group work.

The U.S. studies of cooperative learning and intergroup relations involved African-American, European-American, and (in a few cases) Mexican-American students. A study of Jigsaw II by Ziegler (1981) took place in Toronto, where the major ethnic groups were Anglo-Canadians and children of recent European immigrants. The Sharan (Sharan et al. 1984; Sharan and Shachar 1988) studies of Group Investigation took place in Israel

and involved friendships between Jews of European and Middle Eastern backgrounds.

Mainstreaming

Research on cooperative learning and mainstreaming has focused on the academically handicapped child. One study used STAD to attempt to integrate students performing two years or more below the level of their peers into the social structure of the classroom. The use of STAD significantly reduced the degree to which the normal-progress students rejected their mainstreamed classmates, and increased the academic achievement and self-esteem of all students, both the mainstreamed students and their normal-progress peers. Other studies have revealed similar effects (Ballard et al. 1977; Cooper et al. 1980). In addition, one study of social studies in a self-contained school for emotionally disturbed adolescents found that the use of TGT increased positive interactions and friendships among students (Slavin 1977). Five months after the study ended, the research indicated that these positive interactions continued more often in the former TGT classes than in the control classes. In a study in a similar setting, Janke (1978) found that emotionally disturbed students were more on task, better behaved, and had better attendance in TGT classes than in control classes.

Self-Esteem

Several researchers working on cooperative learning techniques have found that these methods increase students' self-esteem. Significant improvements in self-esteem have been found for TGT and STAD (Slavin 1990), for Jigsaw (Blaney et al. 1977), and for the three methods combined (Slavin and Karweit 1981).

Other Outcomes

Research has indicated that in addition to effects on achievement, positive intergroup relations, greater acceptance of mainstreamed students, and self-esteem, effects of cooperative learning have been found on a variety of other important educational outcomes. These include enjoyment of school, developing peer norms in favor of doing well academically, feeling that the individual has control over his or her own fate in school, time on task, and cooperativeness and altruism (see Slavin 1990). TGT (DeVries and Slavin 1978) and STAD (Slavin 1977; Janke 1978) have been found to have positive effects on students' time on task. One study found that students having low socioeconomic status and at risk of becoming delinquent who worked in cooperative groups in 6th grade had better attendance records, fewer contacts with the police, and more positive behavioral ratings by teachers in 7th through 11th grades than did control students (Hartley 1976). Another study, implementing forms of cooperative learning with students beginning in kindergarten and continuing through the 4th grade, found that students who had participated within well-structured cooperative groups resolved interpersonal conflicts more effectively, expressed more support for democratic values, and scored significantly higher than control students on measures of supportive, friendly, and prosocial behaviors (Solomon et al. 1990).

Balancing the *Social* and the *Studies* in Social Studies

Research on the use of cooperative learning in social studies and other subjects shows that these methods have great potential for teaching a wide variety of social studies topics while enhancing an even wider variety of social skills and prosocial attitudes. Putting students into groups and asking them to work together, however, is not enough. Positive social outcomes have been found for a wide variety of methods, but achievement gains appear to depend on the use of group goals and individual accountability. *Group success must depend on the learning or performance of every student, not on a single group product.*

Social studies lends itself in particular to cooperative learning because, for one thing, many explicit social goals are key objectives of the social studies. It simply does not make sense to teach students about civic, democratic values while they routinely sit in rows listening passively to a teacher. Another reason that cooperative learning is particularly appropriate in social studies is that social studies objectives are so varied. A teacher can use STAD or Learning Together to teach information and skills, Jigsaw to help students learn from written sources, and Group Investigation for group projects and reports. A creative teacher can devise dozens of variations of these and other cooperative learning techniques to facilitate learning aligned with a wide range of social studies objectives.

Used in a thoughtful and informed way, cooperative learning can help create a social studies program in which students are actively, rather than passively, engaged—debating, exploring, questioning, teaching, assessing, experiencing knowledge—to achieve equally the *social* and the *studies* goals of a comprehensive social studies curriculum.

Note

[1]See also Thelen (1960), Joyce and Weil (1980), and Sharan and Sharan (1992) for more information on the Group Investigation model.

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Chapter 5 Five

Elementary Students Can Learn to Cooperate and Cooperate for Learning

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Elementary social studies teachers expect their students to learn to interact with their classmates, get along with others, and take responsibility for themselves. This expectation, however, is not always followed up with instruction on how to accomplish these goals. A classic example is a silent primary or elementary classroom. Many teachers in these classrooms sincerely believe that silence is golden. But is it? Does silence allow for proper communication between the teacher and students or between students? Do periods of silence result in improved thinking, high achievement, and acceptance of personal responsibility? We think not.

One problem with such ideas about silence is that we do not live in a silent society. We live in a society where mass communication demands that we be interdependent. In fact, no single group can exist without the active and continuous interaction of its members. If teachers must prepare students for the world outside the classroom, they must help them to succeed in a world that communicates, that cooperates, and that views responsibility in the context of social meanings. If students are to do this *beyond* the classroom, teachers then have an obligation to make sure students learn how to interact, to cooperate, to succeed, and to be responsible *in* the classroom.

Although we expect students to speak, we often forget that many need to learn *how* to speak. They need to learn such things as how to articulate their thoughts, when to speak, how to control the level of their speech, and what kinds of language are appropriate and inappropriate in particular situations. Many students learn these things through trial-and-error experiences, but many are unsuccessful. These unsuccessful students either avoid speaking or often speak in ways that are inappropriate. In the classroom, we need to help students learn the art and skills of speaking, especially of academic, interpersonal, and cooperative speech.

We must not automatically assume, however, that when students are talking and working in groups in the classroom, they are meeting the teacher's expectations. Students may be speaking with no one listening. They may be sharing ideas and information with no one learning. They may be working alongside others *in* a group without working *as* a group. These students may be interacting but not becoming skilled at interacting. They may assume responsibility for getting their portion of a project completed without learning to be responsible outside such projects.

As these possible results suggest, talking and silence in the classroom are not either-or choices. What is occurring during the silence and during the talking is important.

Using cooperative learning techniques, elementary teachers rely heavily upon student speech and student silences to help large numbers of students meet the teacher's achievement and affective expectations. When used appropriately, cooperative learning theory and strategies can be powerful tools for teaching social studies.

The following section emphasizes the perspective and experiences of Bob Colomb, currently a 2d grade teacher at Sunset View Elementary School. Written in the first person, this section creates a personal sense of the nature of cooperative learning from one elementary teacher's perspective.

The Evolving Cooperative Learning Experience in One Elementary Classroom

My elementary teaching experience has consisted of involvement in various grade levels from 1st through 6th. For years I had used student groups for all kinds of reasons. I never really felt as though I had used groups very well, but students did seem to enjoy being in them and groups did change the routine of the class activities. In other words, I had used groups to do things but had not paid much attention to their structure and organization. During this time I also felt that the sense of cohesion and teamwork I always thought would evolve from students working in groups never emerged. Students formed groups, did their group work, and left their groups as

though the groups had never existed. What I felt was missing was a way to organize the students and groups so they could accomplish what I thought they could.

For years I tried various kinds of group activities, even using commercially produced materials and those given out by presenters at conferences to enhance the quality of my students' group work and the benefits that I thought should result. Although these provided a greater variety of group tasks and activities, they still fell short of what I wanted and what my students needed.

When I first heard about cooperative learning I was both excited and wary. The initial information sounded too good to be true. Could groups really accomplish all that I heard and read they could accomplish? Was it really that easy to transform my class into a cooperative learning environment? Could something that effective be that simple to learn to use? My caution was partially an outgrowth of the attitudes of so many elementary teachers that cooperative learning was only a theory that wouldn't work in their classrooms. Some of my colleagues suspected that this was another theory from university professors who hadn't been in real elementary or secondary classrooms for decades. There were also concerns that cooperative learning was a new fad that would come and go like so many others in recent years.

I was curious and concerned about how I could improve my teaching. I also felt that, as a professional, the least I should do was find out more about cooperative learning to determine whether I should use it in my classroom.

How I Became Involved

When an opportunity arose, I volunteered to travel from Utah to Southern California to see cooperative learning in action. I wanted to find out whether the rumors about its effectiveness were true.

I visited the ABC School District (not its real name) where Spencer Kagan's cooperative learning methods were being implemented. I observed 1st, 3d, 4th, and 6th grade classes. In every classroom, students were using their peers in various ways to teach themselves. At first I was not impressed and was not sold on what I saw. I had expected to visit classrooms in which students had had extensive experience using cooperative learning, were almost "super learners," and had teachers who were veteran users of these strategies. Instead I found teachers and students who were just past the starting line themselves.[1] These teachers were in the early stages of becoming better implementors of cooperative learning teams.

With this perspective, my interpretations of what I was watching changed. Coming to understand that these students were just getting started, I became impressed with what they were learning, how well they stayed on task in their small groups, and how well they interacted with one another. If I could get my students to do many of these things by the end of the year, I would be pleased. If this is what students could accomplish early in their use of cooperative learning, I started to imagine what they could do when they really became experienced users of these strategies. This visit whetted my appetite enough to investigate and read all I could find about cooperative learning.

What I Found in the Theory, Research, and Literature

What proof was there that cooperative learning did what people claimed it could do? More than 530 classroom studies on cooperative learning have been reported (e.g., Johnson and Johnson 1989; Slavin 1990, 1991). These research studies reveal that structured cooperation with others consistently produced higher achievement and productivity than when individualistic or competitive structures were used. Furthermore, students did better in many affective areas (such as getting along with both peers and the teacher), in the quality of their talking with one another, and in the time they spent voluntarily on task (Johnson and Johnson 1987, 1989). In short, these research studies reveal that cooperative learning done well improved the whole child in nearly all the areas of concern to elementary teachers.

What also impressed me was that what I found in the professional journals and textbooks was not just theory and research: I found countless studies done in classrooms like mine where teachers were using cooperative learning with their own students. I found that cooperative learning could work in my classroom if I wanted to put in the time and effort necessary to implement it as it should be implemented.

The philosophy of cooperative learning promotes cooperation and collaboration so that students' energy can be channeled by specific instructional strategies to promote positive academic, affective, and social interaction goals. I learned that appropriate cooperative learning apparently would enable my pupils to achieve higher academic results and productivity.

This was what I was after!

The closer I looked at cooperative learning and its basic elements, the more convinced I became that this could be an effective way to teach social studies. I had to try it in my own classroom. I felt that at last I had something I could adapt and use to enhance student learning of academic and social skills. I decided I would put this new philosophy of cooperation and interaction to the test.

Early Frustrations Led to Further Exploration and Additional Strategies

Well into my second year of using cooperative learning I remained frustrated with the lack of whole-group inclusion activities. Up to that time I had applied nearly all the basic elements of cooperative learning and was using them to the best of my ability. Still, something was lacking. A colleague and I decided that we needed more whole-group inclusion before we formed our students

into small groups. We eventually labeled the element missing in the original list of basic elements "diversity of grouping procedures." I believe this element is critical if the elementary classroom is to evolve into an effective cooperative learning environment.

This diversity, one of the most important elements of cooperative learning, is often ignored. Many educators begin cooperative learning in small-group learning situations, forming their classes into small groups before cooperative skills are practiced by students. In the whole-class group activities I started using, my students learned and improved individual cooperative skills that enabled them to work together in small groups like well-oiled machines. When students fail to achieve acceptable levels of cohesion and skill *before* placing them into small groups, a major result of using cooperative groups will be frustration for the students and teacher alike. When students acquire the skills and get the practice they need, however, frustration is rare.

To ensure quality team achievement, I first created a cooperative atmosphere within my primary level classroom through whole-group inclusion or class-building activities. I find that during the class inclusion activities the cooperative philosophy is modeled for all students. Teacher and students alike are able to see the philosophy and theory behind cooperative learning in actual practice. They also observe the guidelines, expectations, rules for behavior, and attitudes demonstrated and reinforced. Various rewards are used to praise appropriate behaviors and attitudes.

I advise teachers just getting started with cooperative learning in their classrooms to start here. Based on my experience, I believe elementary students will achieve their potential fully only *after* whole-group inclusion is attained.

After I came to realize how important class-building activities were to maintaining a cooperative atmosphere, I continued to use these activities all year long, using a different social goal, content area goal, or academic skill as the focus of each new activity. For instance, I might use math, science, literature, or reading tasks in addition to my social studies topics. Many of my colleagues here at Sunset View agree on the importance of the skills and attitudes that result from these class-building tasks. By continuing cooperative efforts in the class throughout the year, my students reach levels of learning never achieved in my pre–cooperative learning classroom.

Cooperative learning is not a panacea for the problems in education. It is, however, a philosophy and an approach to teaching in which I fully believe.

Cooperative Learning as a Philosophy

Cooperative learning is first and foremost a philosophy. Of course, a philosophy without effective implementation strategies has no power—just as a set of strategies with no philosophical context will have little effect. They are interdependent. The philosophy of cooperative learning through the theory was appealing to me and led me to investigate and then to use many strategies. While using these strategies, I never lost sight of the philosophy-theory behind them. I have observed many teachers use these strategies unsuccessfully because they expect the strategies to work with any philosophy they choose. These strategies work to the extent that their practice is guided by consistent theory and philosophy. I encourage all teachers to spend at least as much time studying and learning to use the philosophy-theory of cooperative learning as they do learning the strategies. Neither will work well without the other.

How can elementary teachers use this philosophy in their classrooms? They must learn the theory, structure the class tasks, get students talking and working together, play down competition, and increase students' positive interdependence. In other words, elementary teachers must use cooperative learning.

Students love to talk. They get excited about moving about in the classroom. They get excited about finding out what others think. They want to share what they know. They are interested in hearing about and studying new things. They tend to get turned off in classrooms where the activities result in one student after another saying the same thing or where the teacher goes around the room or circle and each student says something. In addition, many students have learned that when they get too excited while talking about what they are studying or learning, the teacher will insist that they be quiet to cut down the noise level.

I have found that students have not been taught how to be quiet and how to talk within extended interaction situations. They are directed to be quiet but not taught *how* to be quiet.

In my classroom, I hear structured noise or on-task noise generated from on-task conversation that allows other students and me to listen to the learning that is occurring at that moment. For students to achieve quality structured noise, I teach them how to come face-to-face with one another so that all they need are their twelve-inch voices rather than their typical twenty-four-inch voices.

Elementary students need to learn how to be quiet and also how to be good listeners when they are quiet. In other words, they need to learn that being quiet means they have a number of jobs to do that do not require talking—that being quiet means far more than merely shutting up.

My Classroom Today

Many of my classroom activities start out with whole-group inclusion activities before we move to specific small-group work and then finally to individual work. When the individual work is completed, the product is brought back to the small-group level again and

then to the whole group for presentation and interaction. I consider this type of cooperative learning an advanced form. Ideally, for me, a teacher would want to take a class from whole group to team, from small-group team to individual or competitive, then back to the small group, and finally from the small-group learning teams to the whole group. This shift must be made slowly at first.

On a typical day, the first thing we do in the morning is form a big circle on the floor so everyone faces each other. After some initial conversation and sharing, student groups begin to complete their assigned tasks. One group may work on the calendar for the month, another the science bulletin board, another the social studies project display, and so forth. Each group knows they are responsible for one of these classroom routines each month. Their particular routine changes each month. Early in the year we spend time in our whole-class group learning what it means to be responsible and learning how to carry out each routine so that it is acceptable.

Instead of having a room with fancy, commercially produced bulletin board materials or materials that I spend hours cutting and pasting and my students essentially ignored, my room now has relevant and fact-filled boards that get attention from nearly every student on a daily basis. Students now observe what other groups put on their boards. They now seem to learn a lot from what is posted.

As the months go by, the student groups get better at completing these routines and improving the quality of their projects.

In that first week we also spend time learning how to interact and work *in* groups and how to work *as* a group. The various roles students may need to carry out are explained along with examples. We talk about why these roles are important and what might happen if a role is not carried out. We also share some of our feelings about these roles and why those in the class need to do their jobs in the groups. Some time is spent helping students to feel they are important to the success of the group they are in. We even talk about the ways students can use the groups to learn the material. After the first few weeks, my students have a good sense of what they are to do in their learning groups. We review and continue to work on all these things throughout the year.

Early on, I assign specific roles to specific students in each group. This assignment ensures that the same students are not in the same role all the time. Later, students are allowed to pick the major roles they will play, once again with the restriction that they cannot play the same role all the time.

Helping students think about guidelines for their attitudes and behaviors in these groups takes a lot of time at the beginning. What is gained in student achievement, on-task behavior, and improved social skills, however, more than makes up for the time spent helping them become good cooperative group members.

Usually by the end of the first month of the year, I have determined the membership of the base groups where each student will remain throughout the year. Except in rare situations, this is each student's permanent group. Because these are permanent, I am very careful in my selection of which students should be together for this length of time. From time to time, however, new but temporary groups are formed. These groups are used for different reasons, one of which is to ensure that students work with more of their peers of different gender, race, or ethnic backgrounds.

Small groups with the same and different student membership are used in math, science, reading, language arts, and social studies. Students may remain in their base groups or be reassigned to new groups for one day or several weeks. They may be in one, two, or three different groups on some days depending on what we are studying in the different subject areas. We are not in cooperative learning groups all the time.

I also use various group strategies. Using Jigsaw, for example, students placed in teams may choose to study a particular time period of history but different incidents within this period. Two girls and two boys in a group together once decided to study and learn about the Vietnam War era. The girls did not want to write or study about the war itself, but were interested instead in the hippie movement. They each took a different approach to the hippie movement. The boys investigated two different aspects of the war. One looked at the military situation; the other at the political. The four students then met together and brought back all that they had learned to the group, put it together as a group, and presented a fantastic informational project to the class.

In this same class, each group was also responsible for completing a large section on a historical time line that covered all the walls of the room. This complete project took us about two months and encompassed research, presentations, writing, art, science, reading, and cooperative skills. As students found specific information, they placed it in their section of the time line once their group had confirmed its relevance, importance, and accuracy. At the end of the unit, students shared with the class what they had learned in their particular section of investigation.

I have found that students need not always complete all of the assignments each day just to have it done. For instance, if they are given fifteen questions to answer as part of their social studies group task, I would much rather they answered ten correctly for the day's work, and that they all really knew the correct answers to those ten questions, than have partially correct answers for all fifteen. In part, this decision reflects my acceptance of my role as facilitating optimal student learning as opposed to having students merely finish assignments regardless of what they learn or do not learn.

To ensure that students are working on task and are helped in their learning efforts, the class has adopted the use of the raised hand which is the universal sign in cooperative learning that it is time for everyone to be quiet. This quiet time functions as a time-out during which new directions can be given, points of uncertainty can be clarified, and specific questions can be answered. Students learn early that once the hand is raised, everyone is to take time out in their group work and stop in silence. I am still amazed at how well this signal works and how fast students catch on to the meaning of the raised hand.

Many of the students in their small groups exchange phone numbers to make sure that their groupmates have done their parts of one or more assignments outside of class. After a while, it is not uncommon for them to call each other at home in the evening and on weekends. They share information and make sure that their groupmates have the assignment when they are not in class for one reason or another. On more than one occasion, two or three members of a group have called a fourth who had missed several classes to tell him or her that they were concerned about the student's absence and about the student generally. They also told the absent groupmate that he or she was part of a team and the team couldn't succeed when not all its members were there in class working together.

When some of these absent students arrive back in class they often reported that the members of their groups had called many times to see how they were doing. I now find fewer students voluntarily missing class as the year goes by and students are better informed about what they missed while they were absent.

One day I received a phone call from a parent informing me that the phone at his house had rung at 6:30 that morning. The call, made by a student in my classroom, was for his child. The parent was concerned that his child had been awakened too early in the morning and that the caller was a student in the class. I investigated the matter and found out that this particular student's group was working on a major part of their project and needed everyone in class on that day. The student had missed the day before and his group was concerned he would not be there on that day. So one member of the group volunteered to call the absent student that morning to urge completion of the assignment and attendance at school. The student was in class and was prepared. I find it hard to express my reaction to finding out that the cohesion and mutual concern fostered in this cooperative learning environment would result in 2d graders actually calling each other at 6:30 in the morning to encourage attendance, to lend personal support, and to insist upon completion of the homework assignment. What is more remarkable is that these are not overachievers; they are children of varied socioeconomic and ethnic backgrounds who have *emerged as students* within this cooperative learning environment.

Overcoming Concerns: Two Cases

Implementing effective cooperative learning has implications beyond the classroom walls. A number of situations have arisen that generated concern by people other than the teachers and their students. These situations were handled in ways that promoted the preservation and growth of the cooperative learning environment. The two cases below illustrate how particular concerns were successfully managed.

One problem that emerged from the use of cooperative learning concerned substitute teachers who came into my classroom. These teachers usually expect to have a quiet classroom and maintain total control. In part, they tend to view a quiet classroom as one that meets the absent teacher's expectations. In addition, they don't want anyone to have the impression that they have no control over the students. With cooperative learning, you give the power of learning to the students and they help with the teaching. Over time, the cooperative teams produce many higher-level thinkers and active learners.

Students become accustomed to interacting to help each other learn. Consequently, some of these students will have a difficult time making the transition back to the old way of life, B.T. (i.e., before talking was acceptable). To head this problem off, the same substitute teachers are assigned to cooperative learning classrooms. To further relieve this problem, in-service training sessions in the cooperative learning model should be required of all substitute teachers assigned to these classrooms.

Another problem encountered was that of parents who, for many reasons, did not understand what I was doing with their children in my classroom. This problem was resolved by having a back-to-school night. Parents were given a two-hour training session on the cooperative model and how it was being used in the school. The session included discussion of the research findings along with activities so the parents could have practical experience with cooperative learning. The parents were also given some guidelines and ideas they could apply in their own homes. Many parents requested that follow-up parent training classes be provided so they could be better users of the cooperative models at home. These training sessions have been held. Many parents in our district are now familiar with the cooperative learning philosophy and its basic elements.

Final Points

Appropriate cooperative learning is not easy to start and not easy to achieve. I have trained with Spencer Kagan and with Roger and David Johnson. David once told me that when he came to visit, he would ask me how *my* cooperative learning model was going. He said he would not ask how *his* cooperative learning model was working in *my* class. Because cooperative learning is a philosophy, theory, and set of practical strategies, elementary teachers must take and use what really works

for them as long as it is consistent with the essential elements of this theory. The most difficult part of putting cooperative learning into practice is just to begin. After students begin working for themselves and using their energy for educational purposes, being in a cooperative learning classroom becomes fun. I have more fun and more success with each new month of the school year.

When I travel, presenting cooperative learning workshops, I constantly run into teachers who have been using parts of cooperative learning for their entire careers. What they lacked, however, was a guide to direct them with structured yet flexible methods that would help their students achieve the affective, social, and cognitive learning they desired. Cooperative learning gives names to many of the things teachers do or need to do. The strategies provide concrete ways of refining many existing things they do and guidance for new group structures and tasks. I remind them that they need to develop a philosophy of cooperation and cooperative learning and to use the how-to guidelines to provide structure and organization to this philosophy.

I also point out that even though their students were in groups doing group projects of one kind or another, they may have been using ideas and guidelines that actually prevented or impaired appropriate cooperative learning from occurring. They realize that even though they would like to believe it, they may not be using cooperative learning in their classrooms.

Conclusions and Epilogue

Bob's experiences are those of one elementary teacher. Each teacher's experiences will be different in many ways from those in this Provo, Utah, classroom. We want to point out, however, that there will be many similarities. To make cooperative learning work in any classroom, teachers will need to read the theory, research, and practical how-to literature on cooperative learning; accept the research findings that cooperative learning can generate the numerous positive results claimed; use the guidelines and organizational plans for cooperative groups; and develop a philosophy of cooperative learning that will guide decisions and behaviors in the classroom. In forming a personal conception and philosophy of cooperative learning aligned with the theory and research, teachers will evolve their own personalized versions of cooperative learning. Consequently, they will apply their own cooperative learning philosophies, and not Kagan's (1989; Brandt 1990), Johnson and Johnson's (e.g., 1987, 1989), or Slavin's (e.g., 1990).

We caution that these individualized philosophies must remain aligned with major features of those that have proven themselves on countless occasions in classroom settings. For instance, a cooperative learning philosophy should not allow the teacher to have a half-hour cooperative learning activity three or four times a week as though cooperative learning was a subject like math, science, or language arts. Cooperative learning is a way of teaching and learning, not a subject to teach or activity to complete. A cooperative learning philosophy should not allow just any group work to be accepted as bona fide cooperative learning in practice. Although many teachers do some things consistently with cooperative learning, many group activities we have observed in classrooms are not compatible with appropriate cooperative learning theory or practice.

Social studies is the most natural subject to be learned in a cooperative mode because social studies, when taught properly, requires active discussion and discovery. The very name, *social studies*, should be a clue to what our students need to be doing every day in our classrooms. This name also should be a clue to teachers for ensuring students are *doing social study*.

Cooperative learning done well will create a mood of cooperation in your classroom and among your students that will most likely lead to at least four benefits: students will enjoy social studies more than under conventional teaching strategies; their retention of knowledge will increase; their social and interpersonal skills will improve; and their relationships with students different from themselves will improve. Finally, social studies education should provide experiences that encourage students to want to learn and to achieve their maximum potential. Cooperative learning is a proven way to accomplish these goals.

Note

[1]As I reflected upon that first experience in these classrooms I came to realize that to do cooperative learning well requires study, comprehension, acceptance of a number of new ideas, breaking of old notions and habits, effort, and time. The teachers I observed during their early stages of using cooperative learning are to be commended for their work and for their courage in opening up their classrooms to cooperative learning.

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Chapter 6 Six

Theory into Practice: A Cooperative Learning Success Story in Middle Level Classrooms

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Conflicting expectations for schooling are common among middle school students, parents, and educators. Middle school parents want their children to be physically and psychologically safe. They expect their children to know adults well enough to confide in them. They want schools to foster constructive friendships among students. They want their children to be involved in school activities and to have enough positive experiences in school to want to return to school the next day (Garvin 1987).

Middle school students are malleable and impressionable. Variability in social, emotional, and intellectual development is common. Their growth and development varies and they navigate the transition between childhood and adolescence at various times and at various rates. Teachers and parents can become models and significant others for them (Lounsbury 1990). Yet, middle school students also experience the need to feel independent and self-sufficient. At times, they seem to be quite capable of finding their own way in life; they may, therefore, resent more than appreciate unsolicited attention and advice (Clabaugh 1990).

Middle school educators do not always know how to do all that is expected of them. Caught in the middle, some have been trained in the traditions of elementary education whereas others are more comfortable in secondary schools. Elementary schools are commonly thought to be normative and nurturing places (student-centered) in which the students still feel the influence of parents. In secondary schools, on the other hand, compliant student conduct and deportment may seem less important than successful academic performance. Although schools might not encourage questioning basic authority, breaches of decorum are more commonly viewed as obstacles to the acquisition of desired subject matter than as threats to the social order (Clabaugh 1990).

The Secondary School Recognition Program of the United States Department of Education developed a list of fourteen attributes, drawn from research on effective schools, that it uses as criteria to identify unusually successful public secondary schools. These attributes include

- clear academic goals,
- high expectations for students,
- order and discipline,
- rewards and incentives for students,
- regular and frequent monitoring of student progress,
- opportunities for meaningful student responsibility and participation,
- teacher efficacy,
- rewards and incentives for teachers,
- concentration on academic learning time,
- positive school climate,
- administrative leadership,
- well-articulated curriculum,
- evaluation for instructional improvement, and
- community support and involvement.

The Bala-Cynwyd Middle School, a suburban school district adjacent to west Philadelphia, is included on the department's list of successful public secondary schools (Wilson and Corcoran 1988).

Philip Selim, Bala-Cynwyd's Assistant Principal, works with a staff of teachers some of whom have been trained toward elementary education, others toward the secondary level. Selim's experience building a distinctive middle school ethos and tradition with these teachers leads him to observe that

> elementary school teachers have a more whole child focus whereas secondary school teachers tend to view themselves more as content-matter specialists. The compartmentalized structure of instruction in many secondary schools hides natural links between content areas that are more easily identi-

fied at the elementary level and which add relevance and meaning to learning.

Phil actively supports the inclusion of cooperative learning approaches across the curriculum believing that this will enable teachers and students to notice the natural links between content areas and to establish and build on their knowledge bases.

Research Findings Helped Convince Us to Try

One popular perspective held by teachers and by the public at large is that effective teaching is the steady, clear transmission of new information to passively receptive students who come to understand this information as knowledge (Goodlad 1984; Cuban 1984). Consistent with this perspective, many educators view shortcomings in academic achievement as characteristics of children rather than as failures of the education system (Duran 1991). Furthermore, according to the research, teachers on all levels consistently tend to take personal credit and responsibility for student successes and rarely take the blame when students fail to achieve the teachers' expectations. Yet we know that students who fail to learn according to their potential do so because they are academically behind and lack skills other children, who are better prepared, possess (Bloom 1976; Carroll 1989).

The curricular flexibility of middle schools is one response to the diversity that exists among middle school students. Appropriately flexible curriculum approaches should provide continuous assessment of an individual student's needs. Teachers are responsible for providing appropriate programs of study. The instructional environments they create must stress interrelationships among various disciplines and facilitate the acquisition of learning, thinking skills, and problem-solving skills (Kohut 1990).

Using cooperative learning approaches, students can benefit from the expertise of other students as well as that of teachers. Scribner and Cole (1981) have shown that the acquisition and use of reading and writing skills are greatly enhanced by socialization into cultural activities requiring reading and writing for specific purposes.

When used correctly, cooperative learning activities are capable of improving the academic achievement of all students (Kagan 1985; Johnson, Johnson, and Holubec 1987; Slavin 1990) as well as the social integration and self-esteem of students from varied ethnic and racial backgrounds (Kagan 1986). To be most effective in raising students' academic achievement, these activities require clear group learning goals and individual student accountability. These two requirements are powerful factors that affect both individual and group achievement. Slavin (1989) has proposed additional explanations for the successes associated with cooperative learning.[1]

No single model for the conduct of cooperative learning exists. The models that work best require students to achieve academic goals following specified plans that ensure individual and group productivity, content learning, and on-task interaction. The success of groups in attaining their goals depends upon each member's development of the expertise required to contribute to the group. The structures these models provide serve to ensure that students work *in* groups *as* groups. Leaders in the cooperative learning movement highly recommend that teachers provide extrinsic rewards recognizing accomplishment of goals to each member of each successful student group. Cooperative learning also requires individual student accountability through evaluation of independent learning performances through end-of-unit testing (Duran 1991).

A Report from the Classroom: The Good News

At Bala-Cynwyd Middle School, social studies teachers Bill McKendry and Dennis Dool, along with a team of teachers from other subject areas, are using cooperative learning approaches in their classes. Since 1989, when he participated in in-service activities and workshops supported by the school district, McKendry has been trying a number of cooperative learning strategies. His success has had a ripple effect; other teachers are now giving cooperative learning a try.

McKendry and Dool agree that "some people are traditional teachers; cooperative learning may not be for them." They agree, however, that using cooperative learning procedures do not always necessitate a radical departure from successful, established teaching practices. Effective cooperative learning activities neither replace all direct instruction nor eliminate student accountability.

At Bala-Cynwyd, reading and mathematics teacher Myra Wolpert is convinced that cooperative learning is not a radical departure for her:

> I probably [used cooperative learning] before I heard the term. It is a matter of personal philosophy with me. We live in a high achieving society, but we also fight wars! It is important for children to learn to get along with each other.

McKendry observes that when using cooperative learning strategies, classes are sometimes noisier, discussions are heated, and distractions are common. Positive experiences and high levels of student involvement, however, have led him to believe that teachers can achieve positive results with middle school students.

McKendry has observed insecure students become more confident. He has seen academic discussion develop among students while they are working cooperatively on individual and team assignments. He has been surprised that the initial resistance of loners to cooperative learning teams typically fades away. It is his conviction that, in working cooperatively with his students, more advanced, upper-level students acquire greater quantities of background information instead of rote facts. Students gain depth and breadth of understanding

through discussing facts in context, rather than simply understanding facts as facts. They come to understand how facts can help to form and illustrate concepts.

The teachers at Bala-Cynwyd have personally seen cooperative learning raise the academic achievement of social studies students at the same time helping them improve literacy skills enabling students to increase their participation both in and beyond school. Students learn to develop and refine their own ideas. As they gain experience and security in doing so, they are not as afraid to fail as they were in conventional teaching settings.

McKendry agrees that it is generally true that when students interact in cooperative learning activities, they spontaneously raise and negotiate task-relevant topics. Students discuss the meaning of questions, the content of good answers to questions, and how to find answers to questions. They discuss grammar and the meaning of words, phrases, and sentences. Students discuss their progress in completing assignments and the relationship of social studies content material to their background knowledge—unwittingly, but naturally, employing metacognitive strategies for organizing and directing their learning while acquiring expertise in content.

McKendry has found that even in cooperative learning environments students need a teacher's guidance. For example, a set of rules for noise levels has evolved in his classes: hands up means attention, thumbs down means that a behavior is unacceptable, and a hand signal forming a zero means that silence is called for.

McKendry also employs a bonus point system that provides rewards for completion of assignments in a timely manner and for cooperative behavior marked by the absence of derogatory comments directed at peers. Students can earn bonus points at the end of each social studies unit. McKendry has found that this reward system motivates students in powerful ways.

Clear group goals and individual student accountability have positive effects on students' achievement. With early guidance, including teacher-provided structure for lessons and assignments and close teacher monitoring of student progress, nearly all students will be successful in dividing up jobs, in discussing what they have learned with one another, in giving one another feedback, and in hearing and seeing what others have to offer the group. Students have to be taught not only the content but also how to work in a cooperative group. In far too many classrooms, the most successful students have learned to work independently or competitively. Learning to work cooperatively requires guidance, practice, and feedback.

Team-developed composition projects in which students investigate topics and contribute findings to their teams in their writing have been popular with students. In these projects, group reports are compiled in which data are used to back up student opinions and conclusions. Topics such as "The Revolutionary War: Evolutionary or Revolutionary?" have served well in stimulating student cooperative inquiry. Teachers need to select team gatekeepers who can coordinate and compile the individual work of group members as they complete on-task behavior. Cooperative learning forces students to analyze and verify opinions with evidence, as opposed to reporting facts and generalizations without challenge. Furthermore, cooperative learning and social studies go well together because both value discussion and personal opinions.

Teachers need to convince students about the merits of working and learning together cooperatively. And students need to accept that good things can happen to and for them as a result of this participation. Students articulate their resistance through questions such as, What's in it for me? and What am I going to get out of this? Student resistance to cooperative learning activities and to staying on task are sometimes hard to overcome. Skeptical students will no doubt become convinced, however, that one of the best ways to learn a thing is to teach it and that when students help each other to learn, their abilities to express their own ideas improve. Perhaps the sincerity of these explanations is what convinces students to try to work cooperatively—it works because it makes sense to students.

For outside observers, or even for the teacher in charge, it may be unnerving to see middle school students interact casually and informally as they participate on task in group activities. The sight of students laughing and joking as they speak to one another and the sound of conversational asides might appear to be inconsequential to learning and might discourage some teachers from implementing cooperative learning strategies. Phil Selim has noticed that the social studies classroom seems noisier and student behavior appears more disorganized during cooperative learning lessons. Selim is aware, however, that appearances can be deceiving.

When Phil Selim visits Bill McKendry's classes, he finds student attention focused in sustained ways on social studies course objectives to an extent that is surprising and worthy of note. He has asked McKendry's students what they are learning and has checked to find out how much they are learning. Invariably, students answer th t they are learning and that their answers about what they are learning vary. Students often tell him that the work in Mr. McKendry's class is worthwhile yet more difficult than in their other classes. They have to work with others, work on their own, be accountable to other people, divide up work, make decisions, and resolve conflicts. Students also tell Selim that they learn more in Mr. McKendry's class than they do in others.

Selim realizes that such information is not easily quantifiable. With support and encouragement from the Lower Merion School District through in-service training and staff development activities, other teachers at Bala-Cynwyd, like McKendry, are beginning to imple-

ment cooperative learning across the curriculum. Cooperative learning is not, however, the dominant model for instruction in the district. At present it is not so pervasive that we can say it directly accounts for all our recent high student performances on standardized tests of academic achievement.

For Selim, strict standardized multiple-choice tests do not assess students' ability to interact with each other, nor do they adequately measure thinking skills such as analysis and synthesis. In the long run, skills developed through cooperative learning, such as the ability to work with people whose backgrounds and experiences are different from one's own and to work with others as part of a team, might be more important in the workplace than the ability to do well on standardized tests.

Mike Smith, an English teacher and a member of the team of teachers that works with McKendry, believes that cooperative learning lends itself well to teaching social studies because it makes it possible to look at content in many ways. Smith uses cooperative learning approaches in his English classes. For him, middle school students need more than lectures from their teachers. He also believes that for students to work well in groups cooperatively it is necessary to teach them how to work in groups. Students, he believes, "work best if there is a natural atmosphere that is not restrained," but achieving this atmosphere takes work.

When asked to work cooperatively with other students, achieving students do not automatically share what they know and what they have learned. They do not automatically become teachers and leaders in their groups. Over time, the reluctance of brighter or more capable students to share their work with other, less able students can be overcome. Smith has found that by using essay assignments that students must complete by participating in cooperative groups, attitudes sometimes change. Students become interested in listening to what other students have to say. The process also becomes more interesting to students when they find that to complete their work they must both present their findings to their classmates and defend their personal judgments.

Smith agrees that cooperative learning probably promotes the development of higher-level thinking skills. In cooperative groups, students are less likely to assume that all their teacher expects of them is to take notes from lectures so they can reconstruct information at a later time to pass a test. When a teacher plans cooperative learning activities, students must become more active in their learning. They need to make decisions about what is important and what is not. Students also have "more opportunities to develop and kick ideas around."

Smith has also found that he must work cooperatively with students. Wanting to work cooperatively, however, does not automatically translate into cooperative learning. He has had to work to develop a "comfort level" that takes into account that kids have to be kids. That does leave room for exercising leadership and direction in his role as teacher. He has had to learn how to do these through trial, error, and practice: "Just because you know the principles and the research doesn't mean you can make it work. That takes time!"

Social studies teacher Dennis Dool believes that cooperative learning activities offer his students more time and opportunity to process information. He has noticed that one of the ways his students communicate and process information as they work cooperatively is through "kidspeak"—using their own language. As a result, active verbal student interactions are improved. When the opportunities emerge, students record kidspeak in written form. Dool accepts and encourages students to use their language and idioms "when it shows understanding."

Partly because of McKendry and Smith's enthusiasm for cooperative learning, Dool has decided to integrate cooperative learning activities into his teaching. Dool is convinced that to teach effectively at the middle school level it is necessary to vary instructional activities. The variety of cooperative learning strategies allows him to do so. Dool tries to use at least three activities in teaching a lesson. He has found that strategies such as the Jigsaw method evoke high interest from his students and involve them in classroom activities as teachers and experts.

Dool has also used cooperative approaches effectively to bring closure to a unit and to promote review and practice. He sometimes uses three-day blocks of class time for this purpose. On the first day, he will teach a mini lesson, emphasizing key concepts, vocabulary, and questions of importance. Then the sharing begins. On the second day, cooperative work groups are organized. The group's tasks are to create quizzes on the unit and to refine and improve their questions by trying them on their group members. Thus prepared, on the third day Dool stages review contests using student questions. The winning team members each receive two points that he adds to their grades on the subsequent test.

Dool is still finding his way with cooperative learning. He has attended in-service activities and has gone to workshops on the subject, but he is convinced that teaching is an art and that it takes time for artistic expression to mature. He is convinced by the scientific case that can be made for cooperative learning. He is familiar with research on cooperative learning and with the leaders in the field. He is willing to try it, but for now he often finds that he must rely on his own motivation to try something new in order to convince his students that they have something to gain by cooperating and learning together with him. He knows that good things will not automatically happen simply because he has planned a cooperative learning lesson.

Challenges

Implementing cooperative learning concepts and strategies effectively is a challenge for even the best of teachers. Teachers must replace many traditional practices and assumptions with others that are consistent with this approach. To be successful it is necessary, but not sufficient, to have willing teachers. Knowledge and training need to be provided. Teachers also need freedom to learn new skills and to know that they will receive support while they risk trying something new.

Becoming comfortable with noise and commotion is one adjustment teachers might need to make. It also takes time to develop the finesse and expertise to know the difference between student conversations that are merely social and those that relate to the lessons. Knowing how and when to intervene and to refocus student conversations without getting angry or destroying student interest also requires skill and tact that a teacher can probably learn only through trial and error.

Teachers need to learn how to support team-building processes. It is one thing to assign students to work in groups. To get them to work together as a team is a much more complicated matter. This requires not only planning interesting and engaging learning assignments, but also making decisions about how to structure group activity and motivating groups to act like teams.

For cooperative learning to work, teachers need to instruct students on how to examine evidence and opinions. They need to learn where they can find information, but they also need to learn how to ask for information. Teachers may need to learn how to mediate disagreements and negotiate working arrangements between and with students as cooperative learning unfolds.

One of the more difficult impediments to using cooperative learning successfully in middle school classes is absenteeism. It is hard to motivate groups of students to cooperate and to share learning when they feel that members of their group are not pulling their weight and are dragging the group down. Students who are regularly absent make it difficult for members of their group to share learning tasks and responsibilities. Group members cannot depend on these students to support the group's work. Students who are absent infrequently and who take school seriously are sometimes resentful that they are, or might be, expected to help slackers catch up. Students do not always think it fair that they have to do another student's work or that they should be penalized for others' shortcomings. Yet once the groups begin to function as groups, students really work hard to help each other and develop a strong sense of obligation to help their groupmates succeed.

Over a period of time, fewer students seem to miss cooperative learning classes. We do not know if cooperative learning affected attendance at Bala-Cynwyd since attendance at the school is generally high. We plan to investigate the extent to which attendance improves in classes once cooperative learning groups begin to improve the way they work.

Students need to believe they will benefit personally and substantively from working cooperatively. Most students expect to work individually and competitively in school. These expectations may cause students to resist cooperative learning. To overcome this resistance, teachers not only must be excited by the promise of cooperative learning, they also must be actively committed to making it work. Teachers might need to learn how to modify assessment practices so they can recognize individual and group achievements.

Epilogue

Cooperative learning has acquired a foothold in our middle schools. It may not be a prescription for instant middle school success—it takes serious work and places serious demands on both teachers and students. Cooperative learning will not likely be a fad in our school. Because of the results that we have already obtained, cooperative learning will continue to contribute to middle school education generally, and to social studies education specifically. Cooperative learning groups free students and teachers alike to notice and discover "natural links" that add relevance and meaning to learning.

Note

[1]See chapter 8 of this bulletin.

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Chapter 7 Seven

I Know It Works!: Seeing a Cooperative Learning Strategy Succeed in My Secondary Classroom

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Several years ago as my rifle squad moved up a steep slope we witnessed a jeep with a trailer overturn. Without hesitation, we moved to right the wrong. Ten of us organized ourselves to set the vehicles upright. It went like clockwork. Within minutes, we had the vehicles back on the road, ready to roll. Imagine the way we felt! It was like moving two huge mountains.

I could never have righted that jeep by myself. Could you? Would our results have been the same if one or a number of us had not contributed? Was our effort actually a cooperative effort, or was it merely some form of accidentally successful group work that allowed some members of the squad to be noncontributing hangers-on?

I doubt it occurred to any of us at the time that we had just participated in one of life's great truisms: none of us is as strong as all of us. Each of us that day readily recognized that we were successful collectively for that particular job because each member of the squad had contributed his best. Although each one of us had particular strength capabilities, only our collective best effort enabled us to share the success none of us could have experienced had we exerted the same effort alone.

Is this also true in the classroom? Is it possible that our students' best efforts working together could enable each of them to achieve the success few of them could attain were they to exert the same effort alone? More importantly, are systematic ways available that students, working together, can facilitate both their own learning and achievement and that of every other member of the class?

Research undertaken in many K–12 classrooms has revealed that appropriate cooperative group effort consistently produces positive social, personal, and academic results (e.g., Newmann and Thompson 1987; Slavin 1990).

In the Beginning: Before Cooperative Learning

As a new teacher, one of the first teaching strategies I tried to incorporate into my instructional repertoire was the use of cooperative group work. It soon became apparent that my groups often were not working well cooperatively. Typically, unsuccessful group projects ended up with one or two members doing most or all of the work while the rest did little or nothing. Even groups that did complete an assignment or report successfully tended to follow the same pattern. Groups often splintered into self-segregated smaller groups.

The majority of group projects my students turned in consistently lacked the power, depth, and polish they might have had had all group members contributed their best effort. At times I was so discouraged that I considered abandoning group strategies completely. Still, the ideas students generated working together, pooling their talents, and helping each other learn were powerfully attractive notions—too attractive, in fact, to abandon.

I wanted more than high-quality group projects and groups that operated without my constant supervision. I wanted more than groups in which all members contributed their best effort just to get an assignment finished or report prepared. I also wanted more from individual group members than concern for getting the task done. What I wanted most was for students to use these group tasks as a means by which each would learn more of the material better than each would likely learn by studying separately. I wanted to find a way to make groups in my classroom operate so that students' attention, effort, and time were spent allowing all members to learn as much as they could. In a real sense, I wanted more than cooperation, *I wanted learning—lots of it by all my students.* I wanted all of my students to learn a large part of the material that their respective group was responsible for studying.

Committed to the goals of social studies education, I knew that part of my responsibility was to enable students to leave my classroom at the end of the year with far greater abilities in social participation, interpersonal relations, and working with others than they had entering it. I was frustrated that my group activities were not producing the hoped-for positive attitudes and behaviors. I did not see noticeable advancements in social behavior after the weeks and months of group activities in my classroom. Once I had assigned the task and the

groups met, the group members continued to subdivide the subtasks among group members who went about finishing their subtasks virtually independent of the others in their group. This occurred even when students were sitting next to each other in a group.

Eventually, group members would fit their separate parts together, smooth the transitions, and assemble the final report much like individual auto workers might when what they are working on eventually becomes a car. Instead of increasing the positive interactions and concern within each group, many students worked alone, often avoiding conversations with peers. This is a description of one of my relatively *successful* noncooperative groups; many groups were not even this successful. Furthermore, most students did not seem to care whether they or their group members learned the material. Clearly, my students were not moving toward the goals I valued and used group activities to help them attain.

Because all group members typically received the same grade for their joint project, nothing prevented them from splitting up the work, however that might occur. Although they were responsible to each other for getting their part of the project done, they were not individually accountable for what they were contributing or for what they learned or failed to learn. Under such conditions, it was disappointing—but not surprising—that my students usually earned about the same scores on tests whether they worked in groups or individually prior to the test.

It seems strange to me now how I could have missed the key to my problem. Finally, I realized that I had not included a means of holding team members personally accountable for their contributions to the group's success. I had made no plans for interdependence among group members for each other's success. The group task structures I had been using made no provision for rewarding the groups for meeting clearly stated, preset standards of academic achievement, or for publicly recognizing and rewarding individual improvement. Also missing from my early group activities were clearly defined task specializations for each group member.

To Change or Not to Change

Apparently, I had four choices: I could discontinue using groups altogether, use groups as I had been using them (primarily to break up the class routine dominated by my lectures and demonstrations), continue using them merely as a device to get tasks done or to get longer reports assembled, or find and use an effective model to organize and guide group work.

I decided to find an organizational structure for using groups that would allow me to manage learning and social skill development without my being a pervasive part of that structure. I hoped for a model by which, once the groups got started, each group would run itself. I wanted a teaching strategy that would help all my students retain more information and increase their academic achievement beyond what might happen in a traditional classroom. The strategy, I thought, should also help them refine a systematic approach for solving problems with others. If in the process I could help them to like school better and gain higher self-esteem, so much the better. And while all of this was happening I wanted to be "the teacher who wasn't there." I wanted to place the responsibility for learning where it belongs, with the students. At the same time, I accepted that it was my responsibility as a teacher to foster conditions in which each student could be a highly successful learner. I wanted to motivate students to excel. These intentions, of course, were easier wished for than achieved—but I wanted it all.

I did not pursue this quest free of apprehensions about what I might have to do once I found such a strategy. Part and parcel of my search were a number of questions for which I needed answers: How does one bring about such radical changes in a traditional classroom without inviting bedlam? What was my role to be in a new environment where groups would work to achieve these goals? How different would this new role be from what I have done in the past? How were the students to behave toward me and their peers? What rules would govern these new group structures and the new relationship between my students and myself? What would I have to do to ensure that everyone followed the rules? These are only a sample of the questions I asked and sought to answer.

It became obvious that in addition to finding a new method of helping students study social studies content and materials, I would have to help them acquire and rehearse social skills as well. If I was ever to achieve anything close to the necessary cooperation, I would have to define clearly, make students aware of, introduce, monitor, assess, and let every student practice every one of these social skills. Without these things, especially the clear definitions and practice, my students would not likely learn to use these abilities in their groups or outside the classroom.

The Search

While attending the University of Georgia, I had the good fortune to study with a professor, Ronald L. VanSickle, who was also very much interested in the academic achievement possibilities offered by cooperative learning and its related goal structures. He pointed me immediately in the direction of the Educational Resources Information Center. ERIC had a lot to say. The list of individuals involved in cooperative learning research was long but some names appeared more often than others. Robert Slavin, Spencer Kagan, David Johnson, and Roger Johnson appeared at the time to be the most actively involved. I began my investigation with these practitioners.

To be sure, differences existed among their approaches to cooperative group work. Slavin emphasized equalizing opportunity and individualizing accountability. Kagan stressed the need for using flexible cooperative learning techniques that would allow the teacher to implement cooperative goal structures any number of ways. Johnson and Johnson stressed the need for students to acquire and refine group processing and interpersonal skills. All agreed that students must learn and acquire proficiency at appropriate social skills. Students needed to learn and become skilled at the basic abilities of interaction and communication without which no cooperative strategy could succeed.

After studying and carefully considering these three approaches, I chose to concentrate on the three models (Student Teams-Achievement Divisions, Teams-Games-Tournament, and Jigsaw II) proposed by Slavin (1986). They seemed to have the greatest potential for a secondary social studies classroom. According to a study by Newmann and Thompson (1987), two of the three Slavin models, STAD and TGT, have produced consistently positive academic results. Jigsaw II, however, was reported to have enjoyed only marginal success. Newmann and Thompson reported that Jigsaw II positively affected academic achievement in only 17 percent of the cases studied. I was intrigued.

My Search Ended: Jigsaw II Selected

Jigsaw II seemed perfect for the secondary social studies classroom. Why was it not more effective? It had all the critical elements of STAD and TGT, and, when carried out appropriately, it offered the additional advantages of intense home team and specialized "expert group" interaction, in-depth analyses, and extended on-task discussions.

Jigsaw's relatively poor performance could result only from one of two factors: either the Jigsaw II model itself was flawed or the way teachers used it in the case studies was inconsistent with the model. The model, seemingly straightforward, involved the following elements:

a. whole-class teaching;
b. student readings;
c. expert group discussions;
d. home team reporting;
e. individual testing; and
f. team recognition.

This strategy met all the criteria universally agreed to be necessary to an effective cooperative task structure. The results of studies Newmann and Thompson reported, I surmised, must have been a consequence of defective operation by those who attempted to use the model.

VanSickle and I reviewed the Newmann and Thompson studies as well as a number of other published and unpublished studies. In all of the studies except one, the Jigsaw treatment was similar to Aronson's original Jigsaw (Aronson et al. 1978) and did not meet Slavin's required group reward and individual accountability criteria.

The more I looked at Jigsaw II, the more I liked it. I decided to test Jigsaw II in my classroom. The prospect was exciting.

Determining and Stating Clear Criteria for Classroom Operations

Before introducing this new strategy to my classroom, I needed to organize my thoughts. I had to articulate some basic operational guidelines. These were guidelines I believed every student should understand and follow if we were to have any chance of achieving our primary goal of improving academic achievement. This list was straightforward. I decided that each student needed to understand

a. the academic and social objectives for the strategy and for the academic content they were to study;
b. how they were to accomplish the expected academic and social objectives;
c. the expected group participation behaviors, what they were to do or say and how they were to behave toward others;
d. the nature of positive interdependence and its place within a cooperative learning environment;
e. that they would be held individually accountable for learning materials or skills; and
f. the criteria for success.

It also seemed a good idea to develop a list of rules that all members were to follow. This list would provide dos and don'ts that would guide the activities within the group and among its members. I began collecting ideas from students in all my classes. We finally settled on the following working rules:

a. Follow directions.
b. Stay on task.
c. Help the group stay on task.
d. Offer all necessary information.
e. Check each others' understanding of information.
f. Seek information.
g. Paraphrase information offered by others.
h. State and seek opinions where appropriate.

We also agreed on a list of specific social skills students were expected to use at all times within their groups. These included the following:

a. Practice active listening.
b. When you disagree, disagree with what has been said, not with who is saying it.
c. Encourage others to contribute.
d. Acknowledge and praise contributions.
e. Show appreciation for others' work.
f. Express feelings.

Obviously, I could not expect my students to use all working rules and social skills unless I acted in ways consistent with this model. To fulfill my responsibilities, I had to

a. select and state a precise set of academic objectives that made it clear what students were to learn in each unit;
b. locate or develop a posttest aligned with the academic outcome objectives set for each unit;
c. provide a description of the Jigsaw II model and of the roles and responsibilities of both students and teacher during its operation;
d. determine group membership for each home team;
e. administer and grade pretests;
f. form the groups and establish time lines for activities within the unit;
g. monitor student progress within the groups;
h. administer and grade posttests;
i. compare pretest and posttest scores and determine improvement; and
j. provide public recognition for groups and individual students who meet the criteria.

The research literature on Jigsaw II provided me with details of these steps and how to use them. By consciously paying attention to each of these steps I was able to stay on track when I was planning and using Jigsaw II. This conscious attention also prevented me from doing things in the classroom that were inconsistent with the model.

Using and Testing Jigsaw II in My Classroom

To test my understanding of the Jigsaw II model, I decided to compare its instructional effectiveness against a more traditional whole-class lecture method. Two of my 9th grade world regions geography classes at Fulda American High School, a Department of Defense Dependents Schools high school in Fulda, Germany, would participate in this comparison study. I randomly assigned one class (of twenty-three students) to Jigsaw II and the other (of twenty-two students) to a conventional, whole-class instruction. Both classes contained students from a wide range of academic ability levels, including students enrolled in the school's learning disabilities program. Both classes contained similar students.

The experiment lasted nine weeks and encompassed a complete nine-chapter study of Asia (Swanson 1987). A typical chapter included a narrative description about its topic (e.g., "The Land and People of Southeast Asia") and a social studies feature (e.g., reading a weather chart). From the beginning, the two classes proceeded through the three units (South Asia, East Asia, and Southeast Asia) at a rate of one chapter per week. Both classes used the same text, received the same enabling activities and materials (e.g., lectures, compass work, or map-reading drill), and took the same tests, which accompanied the textbook.

In the experimental class, I organized the cooperative groups according to the Jigsaw II student team learning model (Slavin 1986). I assigned students to four-member teams balanced according to past achievement. The students met several times each week in cooperative groups. They met either in their home teams or their expert groups depending on what they were studying or discussing.

A typical textbook chapter followed these steps: (1) I gave students their general assignment and expert topics. They then read the assigned material consistent with the academic objectives. (2) Students met in their expert groups, became experts, and prepared to teach their respective home team members. (3) Experts returned to their home teams and taught their teammates. (4) Students took the standardized chapter test individually and received two scores. The first score represented students' test scores for grading purposes, and the second was their contribution to the team score based on improved individual performance. (5) I compiled and posted team scores based on total improvement points. I then publicly recognized strong team performances.

I determined improvement points by using a system known as Equal Opportunity Scoring (Slavin 1986). EOS awards improvement points based on improvement differences between test scores and base scores. I used a ten-point maximum. The scores students received on their most recent unit test served as their base score. The ten-point limit worked well in this study, allowing sufficient latitude for steady improvement by low and average achievers. High achievers were also able to score maximum points because a perfect score automatically earned ten points. The minimum number of improvement points a student could earn was zero. I adjusted base scores weekly.

Meanwhile, the control class received instruction in a more traditional format: assigned readings, enabling activities, whole-class discussion, and tests on the same materials and enabling activities. The Jigsaw II class spent less time in lecture and whole-class discussion than the comparison class because of the time required to work in cooperative, small groups.

Results of Final Achievement Tests

According to the posttest scores, the achievement of students in the Jigsaw II class was higher than the comparison class at a statistically significant level.[1] Nearly 80 percent of the twenty-three Jigsaw II students exceeded the average score of the twenty-two comparison class students. I considered the 5.2 percent difference in scores between the two class mean scores practically significant; it was a big enough difference to make a difference to me!

This study and its consistency with the larger cooperative learning research base illustrated for me that Jigsaw II, when used as directed, can produce higher levels of academic achievement than conventional whole-class, noncooperative instructional procedures in secondary social studies classes.

My Role in the Jigsaw II Classroom: Reflections

My role in the cooperative classroom was pleasantly different from my usual role. As the weeks passed and the students became more familiar with the new format, and as they became accustomed to their new relationships and responsibilities, the teams assumed greater overall responsibility for what and how much each of the members learned. It was beginning to look like a machine that could run itself. This allowed me a degree of teaching freedom I had not experienced before. My role became more a consultant or facilitator than a lecturer. As the students assumed more responsibility for learning, I had more time to organize the material they were studying.

Jigsaw II allowed me long periods of uninterrupted time to work with individual teams on specific problems with little or no distraction. We had adopted the "four-before-me" rule, which required intrateam consultation on questions or problems before calling on me.

In the comparison class, work progressed as usual. I did hear some grumbling about why they could not do what first period was doing. Nevertheless, we carried on in the traditional mode: whole-class instruction, all individuals for themselves. The environment of this classroom aptly fit the individual sink-or-swim metaphor proposed by Johnson and Johnson (1989). It became clear that I was working harder in this classroom, but definitely not as intelligently. While students in this class might have been working as hard as students in the cooperative learning class, they were neither working more intelligently nor getting more intelligent. In the Jigsaw II class I was able to see that the labor necessary for individual and group learning and success was equitably and reasonably divided. I was only one of the contributors to their success. I came to realize that for much of the time I was not necessarily the most important direct contributor to what each student learned.

Students within and after This Cooperative Venture

The students using Jigsaw II enjoyed improved academic achievement. That is not the whole story. While engaging in their new classroom roles, other equally important improvements occurred. Improvements in the quantity and, I believe, the quality of students' interactions with one another were evident. One reason for these improvements appeared to be that all students had the chance to belong to three distinct groups: (a) their preferred group of friends, (b) a Jigsaw II home team, and (c) a changing expert group.

I overrode their tendency to self-segregate by assigning them to teacher-manipulated heterogeneous teams. These teacher-made team assignments brought together many students who may have passed the entire year without speaking to each other. After seeing the advantages of such assignments, I plan to continue this practice and encourage other teachers who use this strategy to do the same.

The home team and expert group features of Jigsaw II allowed all students both to give and to receive direct and specific academic help. The Equal Opportunity Scoring procedure appeared to increase the perception that every student's contribution was valuable. Consequently, the necessary exchange of help and information among all students took place within a pleasant and supportive climate. Students of different academic backgrounds had, perhaps for the first time, reason for serious school-related dialogue.

Students enrolled in my school's learning disabilities program seemed to benefit most from the new environment, both academically and socially. We encouraged them to elaborate on their contributions and they tended to receive explanations rather than curt, terminal answers from their teammates. Once the class caught on to the Jigsaw operations, these students were the most enjoyable to watch and assist.

Jigsaw II in Other Social Studies Classes

Teachers can use the format described earlier, with modification, in any social studies class. Table 1 provides a "Worksheet for a Cooperative Unit," based on Lourié (1989), that teachers can use for planning and organizing a unit that follows the Jigsaw II strategy.

In addition to this table and the guidelines described herein, additional detailed information on Jigsaw II and other cooperative learning strategies that work in secondary classrooms can be found in the references listed at the back of this and other chapters in this bulletin.

I have tried here to relate my experiences with one cooperative group strategy. This initial success has encouraged me to continue to use and improve upon Jigsaw II. In addition, I expect to explore other strategies in the weeks and months ahead; surely Jigsaw II is not the only group approach that will work effectively in social studies classrooms.

This chapter is also more than a report of my efforts and successes with groups in my own classroom. I clearly saw that I was not enabling students to attain the goals we value as social studies educators. It was because so many of my students were not achieving the success that I thought they were capable of attaining that I pursued my quest for a more effective way to use groups in my classroom. Today I am satisfied that I am increasingly becoming the effective teacher I want to be.

Although cooperative learning is not the single answer to all my concerns, at the present time it offers me a far more powerful tool than those I had been using. It is a tool more secondary social studies teachers can use starting today.

Table 1

Worksheet for a cooperative learning unit that may be used to guide planning in alignment with the Jigsaw II strategy.

Grade Level:
Course (Subject):
Specific behavioral objectives relative to:
1. Academic content:
2. Academic/processing skills:
3. Social interaction skills:

Organization of class:
1. Number of students in each home team group:
2. Basis of assignment to groups:
3. Description of special room arrangement(s):

Materials/resources to be used/provided:
Format for first class period of the unit:
1. Anticipatory set:
2. Teacher input:
3. Cooperative group work structure:
   a. Group interdependence to be determined by:
   b. Individual accountability to be determined by:
4. Guidelines/rules for participation in groups:

(These may be printed on handouts and distributed to each student.)

5. Time line of events from day to day throughout the unit:

Test questions aligned with objectives to be included on unit exam:
(May attach copy of final unit exam rather than list all items here.)
Standard(s) for high achievement by individuals and groups (following grading of final unit test)

Note

[1]See Mattingly and VanSickle (1991) for details of this entire experimental study, especially a discussion of the statistical data generated. The intent of this chapter is to portray a teacher's use of a cooperative learning strategy in the classroom, and not to report extensively on a study and its findings.

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Chapter 8 Eight

Approaches to Implementing Cooperative Learning in the Social Studies Classroom

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Two are better than one, because they have a good reward for toil. For if they fall, one will lift up his fellow; but woe to him who is alone when he falls and has not another to lift him up. And though a man might prevail against one who is alone, two will withstand him. A threefold cord is not quickly broken.

—Ecclesiastics 4:9–12

Cooperative learning is an old idea, or as some social studies teachers might say, "cooperative learning has a long history." The Talmud clearly states that in order to learn you must have a learning partner. In the first century, Quintillion argued that students could benefit from teaching one another. The Roman philosopher Seneca advocated cooperative learning through such statements as, *qui docet discet* (when you teach, you learn twice). Johann Amos Comenius, in the seventeenth century, believed that students would benefit from both teaching and being taught by other students. In the late 1700s, Joseph Lancaster and Andrew Bell made extensive use of cooperative learning groups in England, and the idea was brought to the United States when a Lancastrian school was opened in New York City in 1806. Within the Common School Movement in the United States in the early 1800s there was a strong emphasis on cooperative learning. In the last three decades of the nineteenth century, Colonel Francis Parker brought to his advocacy of cooperative learning enthusiasm, idealism, practicality, and an intense devotion to freedom, democracy, and individuality in the public schools. His fame and success rested on his power to create a classroom atmosphere that was truly cooperative and democratic. Parker's advocacy of cooperation among students dominated U.S. education through the turn of the century.

Following Parker, John Dewey promoted the use of cooperative learning groups as part of his famous project method in instruction. In the late 1930s, however, schools began to emphasize interpersonal competition. In the late 1960s, individualistic learning began to be used extensively. After forty years of exploring competitive and individualistic learning, and after numerous research studies demonstrating the efficacy of cooperative learning, schools in the United States are returning to cooperative learning.

Enabling Definitions

Cooperation means working together to accomplish shared goals. Within cooperative activities in the social studies classroom, individual students seek outcomes that are beneficial to themselves and beneficial to all other group members. *Cooperative learning* means instructionally using small groups so that students work together to maximize their own and each other's learning (Johnson, Johnson, and Holubec 1990). Within cooperative learning groups, students are given two responsibilities: to learn the assigned material and to make sure that all other members of their group do likewise. In cooperative learning situations, students perceive that they can reach their learning goals only if the other students in their learning group also achieve the goals. Students discuss the social studies material with each other, help each other to understand it, assist each other in using the information and abilities appropriately, and encourage each other to work hard.

Cooperative learning groups may be used to teach specific content (formal cooperative learning groups), to ensure active cognitive processing of information during a lecture (informal cooperative learning groups), and to provide long-term support and assistance for academic progress (cooperative base groups) in the classroom (Johnson, Johnson, and Holubec 1990). Any assignment in any curriculum for a student of any age can be done cooperatively.

Teachers create *formal cooperative learning groups* to complete specific tasks and assignments such as learning material from a textbook, writing reports or themes, investigating and explaining historical events, and reading and interpreting documents, graphs, books, or news articles. Using this type of cooperative group, the teacher introduces the lesson, assigns students to

groups of two to five members, gives students the materials they need to complete the assignment, and assigns roles to individual students. The teacher then explains the task, teaches any concepts or procedures the students need to know to complete the assignment, and structures the cooperation among students. Students work on the assignment until all group members successfully understand the material and complete the group's task. While the students work together, the teacher moves from group to group systematically monitoring their interaction. The teacher intervenes when students do not understand the academic task or when problems arise from working together. After the groups complete the assignment, the teacher evaluates the academic success of each student and has the groups discuss how well they functioned as a team. In working cooperatively, students realize they have a stake in each other's success; they become mutually responsible for each other's learning.

Informal cooperative learning groups are temporary, ad hoc groups used as part of lecturing and direct teaching to focus student attention on the material, create an expectation set and mood conducive to learning, ensure that students cognitively process the content, and provide closure to an instructional session.

Finally, *cooperative base groups* are long-term groups (lasting an entire semester or year) with a stable membership whose primary responsibility is to give all members the support, encouragement, and assistance they need to progress academically.

Cooperative learning may be contrasted with competitive and individualistic learning. In the *competitive* classroom, social studies students work against each other to achieve a goal that only one or a few students can attain. Teachers grade students on a curve, which requires them to work faster and more accurately than their peers. Thus, students seek an outcome that is personally beneficial but detrimental to all other students in the class. In the *individualistic* classroom, students work by themselves to accomplish learning goals unrelated to those of the other students. Individual goals are assigned, students' efforts are evaluated on a fixed set of standards, and students are rewarded accordingly. Consequently, students seek outcomes that are personally beneficial while ignoring as irrelevant the academic achievement of their groupmates and classmates.

In addition to structuring classroom work cooperatively, school administrators or social studies supervisors may structure teachers into cooperative teams. Three types of cooperative teams might exist within a school (Johnson and Johnson 1989b). *Collegial support groups* are formed to increase teachers' instructional expertise and success. They consist of two to five teachers who meet weekly and discuss how to improve cooperative learning within their classrooms. Teachers are assigned to task forces to plan and implement solutions to schoolwide issues and problems such as curriculum adoptions and lunchroom behavior. Faculty meetings, on the other hand, use *ad hoc decision-making groups* to involve all staff members in important school decisions. The use of cooperative teams at the building level ensures that a congruent cooperative team-based organizational structure will exist within both classrooms and the school.

Cooperative Learning Is Here to Stay

We know a lot about cooperative learning and we have known it for some time. Since 1898, more than 550 experimental and 100 correlational research studies have been conducted on cooperative, competitive, and individualistic efforts. We know more about cooperative learning than we do about lecturing, age grouping, departmentalization, inquiry teaching, critical thinking, starting reading at age six, or the fifty-minute period. We know more about cooperative learning than about almost any other aspect of education.

Teachers can use cooperative learning with confidence at every grade level, in every subject area, and with any task. Research participants have varied as to economic class, age, sex, nationality, and cultural background. A wide variety of research tasks, ways of structuring cooperation, and measures of the dependent variables have been used. Many research workers with markedly varying orientations working in various settings, countries, and decades have conducted the research. The research findings on appropriately implemented cooperative learning groups is both valid and generalizable to a degree rarely found in the educational literature.

Cooperation is a generic human endeavor that affects many instructional outcomes simultaneously. Over the past ninety years, research has focused on such diverse outcomes as achievement, higher-level reasoning, retention, achievement motivation, intrinsic motivation, transfer of learning, interpersonal attraction, social support, friendships, prejudice, valuing differences, social support, self-esteem, social competencies, psychological health, amd moral reasoning. These numerous outcomes may be subsumed within three broad categories: effort to achieve, positive interpersonal relationships, and psychological health (see figure 1) (Johnson and Johnson 1989a).

Cooperative learning is here to stay. Because it is based on a profound and strategic theory and because substantial research validates its effectiveness, there probably will never be a time in the future when cooperative learning is not used extensively within educational programs. Because of its effects and likely widespread use in the future, social studies educators need to understand the various approaches to implementing cooperative learning.

Figure 1. Outcomes of Cooperation

Implementing Cooperative Learning in the Social Studies Classroom

We might place approaches to implementing cooperative learning within social studies classrooms on a continuum with conceptual applications at one end and direct applications at the other. *Conceptual applications* are based on an interaction among theory, research, and practice. Teachers are taught a general conceptual model of cooperative learning that they use to tailor cooperative learning specifically for their circumstances, students, and needs. In essence, teachers are taught an expert system of how to implement cooperative learning to create a unique adaptation. *Direct applications* are packaged lessons, curricula, and strategies that teachers use in a prescribed manner. The direct approach may be divided into three subcategories: strategy, curriculum package, and lesson approaches.

We might illustrate the difference between conceptual and direct applications by the following example. Practically everyone knows how to run a videocassette recorder. You tune the television to the appropriate channel, turn on the VCR, insert the tape, and press "play." When the VCR breaks, however, few of us know how to repair it. Most of the things we use, we use as technicians. We can follow the instructions, but we really do not understand how the thing works, we cannot adapt and modify it to our unique circumstances, and we cannot repair it when it breaks. A few of us are engineers in the sense that we have the conceptual knowledge required to modify and adapt the things we use and to repair them when they break. We may train teachers to use cooperative learning as technicians (i.e., following step-by-step instructions) or as engineers (i.e., from a conceptual understanding of cooperative learning and how it needs to be adapted to and implemented within their specific circumstances to gain maximum benefits from its effects).

These two approaches to implementing cooperative learning are not contradictory—they supplement and support each other. A carefully crafted approach to cooperative learning requires a combination of clear conceptual understanding of the essential components of cooperative learning, concrete examples of lessons and strategies, and repeated implementation in classrooms and schools over extended periods of time.

A Conceptual Approach

The conceptual approach requires social studies teachers to learn both a conceptual understanding of cooperative learning (its nature and essential components) and the skills to use that understanding to plan and teach cooperative learning lessons, strategies, and curriculum units uniquely tailored to their specific students and circumstances. Conceptual approaches to cooperative learning have been developed by Elizabeth Cohen (1986) and the authors of this chapter (Johnson 1970; Johnson and Johnson, F. P. 1991; Johnson, Johnson, and Holubec 1990). Cohen based her conceptual principles on expectation-states theory while we base our conceptual principles on the theory of cooperation and competition Morton Deutsch built from Kurt Lewin's field theory. The conceptual approach assumes that each teacher faces a complex and unique combination of circumstances, students, and needs and, therefore, cooperative learning needs to be adapted and refined uniquely to fit each teacher's situation. Understanding the essential elements allows teachers to think creatively about cooperative learning and to produce any number of strategies and lessons.

The goal of the conceptual approach is to develop teachers' expertise in cooperative learning so they can

1. take any lesson in any subject area and structure it cooperatively;
2. practice the use of cooperative learning strategies until they are at a routine and integrated level of use and implement cooperative learning at least 60 percent of the time in their classrooms;
3. describe precisely what they are doing and why they are doing it in order to (a) communicate to others the nature of cooperative learning and (b) teach them how to implement cooperative learning in their classrooms; and
4. apply the principles of cooperation to other settings, such as collegial relationships and faculty meetings.

The conceptual approach is used in all technological arts and crafts. An engineer designing a bridge, for example, applies validated theory to the unique problems imposed by the need for a bridge of a certain

length, to carry specific loads, from a bank of one unique geological character to a bank of another unique geological character, in an area with specific winds, temperatures, and susceptibility to earthquakes. Teachers engage in the same process by (a) learning a conceptualization of essential components of cooperative learning and (b) applying that conceptual model to their unique teaching situations, circumstances, students, and instructional needs. The conceptual approach to implementing cooperative learning is based on theory that is validated by research and made operational through the elements identified as essential to cooperative efforts.

Theory Base for Cooperative Learning: Where Did It All Come From?

To understand the theory and research on cooperative learning, it helps to know the sources from which most of it came. In the early 1900s, one of the founders of the Gestalt School of Psychology, Kurt Koffka, proposed that groups were dynamic wholes in which the interdependence among members could vary. One of his colleagues, Kurt Lewin, refined Koffka's notions in the 1920s and 1930s. Lewin's insights led him to state that interdependence among members was the essence of groups. One of Lewin's most brilliant graduate students, Morton Deutsch, took Lewin's thinking several giant steps forward when, in the late 1940s, he formulated a theory of cooperation and competition.

Despite the clarity of Deutsch's theory, practical applications were slow to materialize in the 1950s. In the early 1960s, a high school English teacher and one of the authors of this article, David Johnson, became one of Deutsch's graduate students at Columbia University. His brother Roger, an elementary schoolteacher at the time, was spending his summers working with Jerome Bruner and a group of scientists at Harvard University developing the inquiry-based ESS science curriculum. David and Roger spent much of their time together discussing Deutsch's theory of cooperation and its relevance to teaching and to the school as an organization. In the late 1960s, after Roger and David became colleagues at the University of Minnesota, their work extending the Koffka/Lewin/Deutsch theories to schools took a major leap forward (see Johnson 1970).

Our work is based on the premise that if students' learning goals are structured cooperatively, then students will assist, encourage, and support each other's efforts to achieve. This interaction pattern in turn results in greater learning, more positive relationships among students, and increased psychological well-being. This theory of cooperation, furthermore, can be applied on three levels: classroom learning (including the in-service training of educators); teacher teams at the building level; and administrator teams at the district level.

Validated by Research in Actual Classroom Settings

Having a clear, highly practical theory is not enough. Research must be conducted to validate or nullify the theory. Over the past thirty years, for example, we have conducted more than eighty-five research studies to identify the essential components that make cooperation work. Cooperative learning is one of the most empirically validated instructional procedures available to educators.[1]

What Makes Cooperative Learning Work?

Social studies educators need to learn the essential elements of cooperation for at least two reasons. First, they need to tailor cooperative learning to their unique instructional needs, circumstances, curricula, subject areas, and students. Second, they need to diagnose any problems students have in working together and intervene to increase the effectiveness of the student learning groups. *Simply placing students in groups and telling them to work together does not in and of itself result in cooperative efforts—or positive effects on students.* Group efforts may go wrong for many reasons. Seating students together can result in competition at close quarters or give way to individualistic efforts with talking added. Teachers must understand the essential elements of cooperation if they are to implement cooperative learning successfully. Teachers need enough training and practice on the essential elements of cooperation to become educational engineers who can take their existing lessons, curricula, and courses and structure them cooperatively.

When teachers have real expertise in using cooperative learning, they will structure five essential elements into instructional activities. Well-structured and poorly structured cooperative learning lessons in the social studies classroom at all levels can be distinguished on the basis of these elements. These essential elements, furthermore, should be carefully structured within all levels of cooperative efforts. Each learning group is a cooperative effort, but so is the class as a whole, the school, the teaching team, and the school district. The five essential elements are as follows.

1. *Positive interdependence* The heart of cooperative learning is positive interdependence. Students must believe that they *sink or swim together.* Within every cooperative lesson, positive goal interdependence must be established through mutual learning goals. Teachers must structure the group and the group task so that all students learn the assigned material and make sure that their groupmates learn the assigned material. Positive interdependence can be strengthened in three ways: (a) providing joint rewards (e.g., if all members of a group score 90 percent correct or better on the test, each receives five bonus points); (b) dividing resources equally among all members; and (c) assigning complementary roles to each member (e.g., reader, checker, encourager, and elaborator).

2. *Face-to-face promotive interaction* Once teachers establish positive interdependence, they must ensure that students interact to help each other accomplish the task and promote each other's success. Students are expected to discuss what they are learning, explain to each other how to solve the assigned problems or complete the assignments, and provide each other with assistance, support, and encouragement. Silent students are uninvolved students who are not contributing to their groupmates' or their own learning. Promoting each other's success results in both higher achievement and in getting to know each other on both a personal and a professional level.

3. *Individual accountability* The purpose of cooperative learning groups is to strengthen each member. Students learn together so that they can subsequently perform better as individuals. To ensure that each member is strengthened, teachers hold students individually accountable to do their share of the work. The teacher assesses each student's performance and returns the results to the group and the individual. It is important that the group knows who needs more assistance, support, and encouragement in completing the assignment. It is also important that group members know they cannot hitchhike on the work of others.

4. *Social skills* Contributing to the success of a cooperative effort requires interpersonal and small-group skills. Placing socially unskilled individuals in a group and telling them to cooperate does not guarantee that they will be able to do so effectively. We must teach students social skills for high-quality collaboration and motivate them to use those skills. We must teach leadership, decision making, trust building, communication, and conflict-management skills just as purposefully and precisely as academic skills.

5. *Group processing* Teachers need to ensure that members of each cooperative learning group discuss how well they are achieving their goals and maintaining effective working relationships. Groups need to describe which member actions are helpful and which are unhelpful, and make decisions about which behaviors to continue or change. Appropriate processing enables learning groups to focus on group maintenance, facilitates the learning of social skills, ensures that members receive feedback on their participation, and reminds students to practice collaborative skills consistently. Five of the keys to successful processing are allowing sufficient time for processing to take place, making processing specific rather than vague, maintaining student involvement in processing, reminding students to use their social skills while they process, and ensuring that the teacher has communicated clear expectations about the purpose of processing.

Conceptual understanding and skillful use of cooperative learning are two sides of the same teaching expertise coin. Theory *is* the cutting edge of practice. Through the attainment of conceptual understanding of how to teach, true teaching genius can emerge and be expressed. The complexity and promise of conceptually understanding cooperative learning make adherence to the guidelines for implementing cooperative learning essential. In short, *unless social studies teachers follow the guidelines and criteria, they should not expect to obtain the multitude of positive results cooperative learning strategies can achieve.* Once social studies teachers understand and learn the essential elements of cooperative learning, they can fine-tune and adapt it to their specific circumstances, needs, and students.

Gaining Expertise in Using Cooperative Learning

James Watson, who won a Nobel Prize as the codiscoverer of the double helix DNA molecule, once stated that nothing new that is really interesting comes without collaboration. Gaining expertise in using cooperative learning is in itself a cooperative process that requires a team effort. Gaining expertise and becoming a skilled user of cooperative learning are extended, complex processes that place both cognitive and emotional demands on teachers.

In order for social studies teachers to implement cooperative learning at a routine-use level (where they can automatically structure a lesson cooperatively without preplanning or conscious thought), they need to gain experience in a step-by-step manner. They need progressively to refine their competencies by

1. planning and teaching a cooperative lesson;
2. assessing the strengths and weaknesses of the lesson;
3. reflecting on how to improve their teaching in the next lesson (thus clarifying the teacher's conceptual understanding);
4. planning and teaching a second cooperative lesson with the modifications suggested by the feedback received about the first; and
5. assessing the strengths and weaknesses of the second lesson, reflecting on how to improve their teaching on the next lesson, and teaching the third lesson. This process should be repeated continually until the person retires from teaching.

A support system is needed to encourage and assist teachers in a long-term, multi-year effort to improve continually their competence in using cooperative learning. With only a moderately difficult teaching strategy, for example, teachers may require from twenty to thirty hours of instruction in its theory, fifteen to twenty demonstrations using it with various students and subjects, and an additional ten to fifteen coaching sessions to attain higher-level skills. For a more difficult teaching strategy like cooperative learning, teachers may need several years of training and support to ensure that they learn it well. We prefer to take three years to train a teacher fully in the fundamentals of cooperative learning, the advanced use of cooperative learning, and the use of

academic controversies to encourage social studies students to challenge each other intellectually.

Harvey Firestone (of Firestone Tires) once said that it is only when we develop others that we permanently succeed. To gain expertise in using cooperative learning, teachers must help their colleagues gain expertise. The key to successful implementation of cooperative learning is the use of collegial support groups (Johnson and Johnson 1989b). During training sessions, teachers learn about cooperative learning and the essential elements that make it work. Teachers then transfer this knowledge to their classrooms and maintain their use of cooperative learning for years to come. The success of the training depends on transfer (i.e., teachers trying cooperative learning in their classrooms) and maintenance (i.e., teachers using cooperative learning over a long period of time).

Social studies teachers must engage in cooperative learning for some time before they begin to gain expertise. This usually requires support, encouragement, and assistance from colleagues. Transfer and maintenance, therefore, depend largely on teachers organizing themselves into cooperative teams and collegial support groups that focus on helping all members progressively improve their competence in using cooperative learning.

Alternative Approaches to Implementing Cooperative Learning

At the other end of the continuum are *direct approaches* to cooperative learning that are relatively inexpensive and take little time to implement. Teachers may be trained to conduct a specific cooperative learning lesson, use a specific cooperative learning curriculum, or use a specific cooperative learning strategy. These direct applications are basically atheoretical. The goal of the direct approach is to train teachers to use step-by-step, prescribed procedures and curriculum materials that teachers have used successfully in other classrooms. The trainer informs the trainees about the procedure, demonstrates or models the procedure, and then the trainee practices the procedure.

Such training is based on a number of assumptions, one of which is that all classrooms and students are basically the same and that, therefore, the same strategy, curriculum, or lesson will be equally effective in all schools. Another assumption is that teachers need to know only the steps involved in using cooperative learning. If we assume teachers repeat the procedures dozens of times, they will become quite skillful technicians. The problem with such technical competence is that it does not enable teachers to be flexible in their implementation and to adapt cooperative learning to new problems.

Direct approaches have focused on specific lessons, strategies, and curriculums. When teachers are trained in how to use cooperative learning from the *lesson approach*, they are offered a specific lesson structured cooperatively (such as an English lesson on punctuation, a mathematics lesson on long division, or a science lesson on what sinks and what floats) and shown a demonstration of how the lesson is taught. Teachers are then expected to go back to their classrooms and conduct the lesson.

The *strategy approach* trains teachers to use specific cooperative learning strategies, typically demonstrated with one or more specific lessons. The steps required to implement the strategy are listed. Once teachers learn the strategy, it may be used to build a number of cooperative lessons and integrate them into existing curriculums. Some of the most powerful strategies include the Jigsaw method developed by Elliot Aronson and his colleagues (1978), the Co-op Co-op strategy refined by Spencer Kagan (1988), the Group Project method developed by Sharan and Sharan (1976), and math Groups-of-Four developed by Marilyn Burns (1981). The number of available strategies increases yearly.

The *curriculum package approach* trains teachers to use a curriculum package within which lessons are structured cooperatively. Teachers are given a preset curriculum that contains all the materials and procedures necessary for implementation in their classrooms. They are trained in how to use them in their own classroom situations. As with all curriculums, the packages tend to be subject area and grade level specific. Dozens of curriculum packages that include instructions for using cooperative learning groups with the lessons are being published. This approach is best represented by the work of David DeVries, Keith Edwards, and Robert Slavin at Johns Hopkins University (Slavin 1986). The packages they have developed include Teams-Games-Tournament, Student Teams-Achievement Divisions, Team-Assisted Instruction, and Cooperative Integrated Reading and Composition. While these curriculums are a mixture of cooperative, competitive, and individualistic activities, they are built around or contain numerous cooperative lessons.

Finally, *cooperative activities* that are related to cooperative learning may be used in the classroom. Teachers may use group-building activities (such as "favorite sports and hobbies," "pets I wish I had," and "team juggling") and cooperative games. Teachers may also have support groups within the classroom and promote classwide cooperation through class meetings. Although all these activities enhance the effectiveness of cooperative learning activities, they are *not* considered cooperative learning because they contain no academic goals.

Differences among the Approaches

Although the conceptual and direct approaches to cooperative learning are not contradictory, differences exist for the transfer of training from the workshop to the classroom and the long-term implementation and survival of cooperative learning. Conceptual applications

are based upon theory whereas direct applications are based upon materials and procedures. The conceptual approach promotes research that tests theory general to many situations. Direct approaches promote evaluation studies that are, in essence, case studies demonstrating how well the curriculum or strategy was implemented in a specific instance, but the results do not generalize to other situations and implementations. Conceptual approaches are dynamic because they can be changed and modified on the basis of new research and refinements of the theory. Direct approaches are static in that they remain fixed no matter how the knowledge about cooperative learning changes.

The conceptual approach trains social studies teachers to be engineers who adapt cooperative learning to their specific circumstances, students, and needs. Direct approaches train teachers to be technicians who use the cooperative learning curriculum or strategy without understanding how it works. As engineers, teachers can solve implementation problems and adapt cooperative learning to their specific circumstances, students, and needs. As technicians they cannot. The development of expertise in using cooperative learning depends on understanding cooperation conceptually. The conceptual approach promotes personal commitment by teachers to cooperative learning as they adapt it to their situations. The direct approach does not.

When teachers gain expertise in cooperative learning through conceptual understanding, they become independent of outside experts and can generate new lessons and strategies as the need arises. They can also transfer their use of cooperative learning to improve cooperative collegial relationships, staff meetings, relationships with parents, and committees. They become important figures in the staff development process as they train their colleagues to use cooperative learning. Teachers trained in the direct approaches remain dependent on outside experts, cannot generate new lessons or strategies on their own, cannot transfer cooperation from the classroom to the school, and cannot train their peers (except in a direct way). Finally, the conceptual approach requires continuous support and assistance in gaining expertise in cooperative learning. Direct approaches do not.

Direct approaches have value within the context of long-term implementation of a training program emphasizing conceptual understanding of the essential elements of well-structured cooperative lessons. Without the conceptual context, direct approaches are, in the long run, inadequate at best and counterproductive at worst. Simply presenting a theoretical framework, on the other hand, is also inadequate. An effective training program requires a combination of a conceptual understanding of the essential elements of cooperative learning, concrete examples of lessons and strategies, opportunities for practice with feedback, and implementation over an extended period of time in the teacher's own classroom.

Summary and Conclusions

We may place approaches to implementing cooperative learning on a continuum with conceptual applications at one end and direct applications at the other. In *conceptual applications*, social studies teachers learn a general conceptual model of cooperative learning. This model integrates the essential elements of positive interdependence, face-to-face interaction, individual accountability, social skills, and group processing. Teachers are assisted in tailoring cooperative learning specifically to their personal school and subject circumstances, students, and needs. *Direct applications* consist of packaged lessons, curricula, and strategies they can use in a prescribed manner. The direct approach can be divided into three subcategories. Teachers can adopt a strategy that is aimed at using cooperative learning in a specific subject area for students of a certain age or grade (also labeled the strategy approach). Teachers might also adopt a curriculum package aimed at a specific subject area and grade level (i.e., the curriculum package approach), or they can replicate a lesson they observed another teach (i.e., the lesson approach).

As described here, appropriate cooperative learning is a complex instructional procedure that requires conceptual knowledge as well as the skills of using specific lessons, curricula, and strategies. If cooperative learning is going to be institutionalized within a social studies department, school or district, teachers must become experts in the conceptual system of understanding how to structure cooperative lessons and how to solve the problems of adapting cooperative learning to their specific circumstances, students, and needs. Simply presenting or reading about this theoretical framework and the practical guidelines is not enough. There are no quick solutions or shortcuts to becoming an effective cooperative learning social studies educator.

Finally, gaining expertise in cooperative learning ultimately requires years of effort. Such long-term training and implementation programs require a support system. Collegial support groups at the building level and cooperative learning within the classroom go together. Each enhances the effectiveness of the other.

Note

[1]For a review of this research, see, for example, Johnson and Johnson (1989a).

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Chapter 9 Nine

Complex Instruction in the Untracked Social Studies Classroom

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As the curtain rises, an institutional gray desk, a round table, carts loaded down with textbooks, and a sagging sofa take shape. Although it is September, the heat of August still lingers. Jean rises to open a window. The social studies teachers at Valleyview Middle School in West Los Palos, California, have gathered in their department office to share insights from summer workshops and travels and to plan for the upcoming year. They sit casually, some at the table, some on the sofa.

Valleyview is a newly reconfigured middle school. In recent years, the school has had a dramatic influx of Spanish-speaking and Asian students. In the face of these changes, most teachers agreed that they could no longer continue with business as usual. Too many kids were shut out, got lost, or were dispirited. Indeed, given the widening gap between worn-out pedagogy and recent changes in the student body, the teachers boldly took action: they decided to untrack Valleyview. Upon making this decision, the school applied for and received a grant from the state to plan and implement innovative approaches to teaching in heterogeneous classrooms.

A state grant sponsored four 7th grade teachers' enrollment in a two-week institute at Stanford University devoted to Complex Instruction. CI, a model of cooperative learning for heterogeneous classrooms, focuses on the development of students' higher-order thinking. At the institute, the teachers studied the principles of CI and practiced it with middle school students. During the following school year, the four teachers tried CI in their classrooms. Staff developers from Stanford visited their classes and provided feedback on implementation.

The Complex Learning Classroom

These four teachers, convinced that the approach would work, were eager to get all members of their department to move in the direction of Complex Instruction. Imagine that we are in the school when these teachers return from their training. Imagine further that we are present at the first department meeting and these teachers are excited by what they have to share. As the action begins, the four Complex Instruction advocates are engaging in a dialogue with their skeptical but interested teacher colleagues—trying to persuade them of the value and practicality of Complex Instruction. We eavesdrop on their conversation.

Managing the Classroom

SIT (Skeptical but Interested Teacher): I tried cooperative learning, and once was enough for me—what a disaster! The kids would not stay in their groups. Many were not doing their work. I ran from group to group putting out fires. No learning was taking place.

CIA (Complex Instruction Advocate): Yes, this can definitely happen when the teacher shifts to small groups that are supposed to work on their own. *Cooperative learning requires new behaviors for both the students and the teacher.* The teacher, as you found out, can't be everywhere at once. With groupwork, a fundamental shift in the teacher's role is unavoidable: You need to delegate authority to the students so they will take responsibility for their own behavior and learning while in the groups.

SIT: How does one do that?

CIA: In Complex Instruction, an activity card lays out a different task for each group (e.g., see figures 1a and 1b). Students as a group are responsible for completing their task. In addition, each student writes an individual report after completing the task.

SIT: Sounds pretty straightforward, but that isn't going to control behavior by itself.

CIA: You're right. That only prevents you from having to run from group to group telling people what to do. We use two other important methods of classroom management in CI to control behavior. One is early training of the students in new cooperative norms, or rules for their behavior. Last year, we prepared students for groupwork before we started with the regular curricular materials. Students learned how to help each other, how to explain to each other, and how to talk to each other about their ideas. They understood that no one is done until everyone is done. We used skill-building activities in small groups to develop the behaviors that students need for working well in groups. The students

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Figure 1a: Activity Card

Unit: CRUSADES
HOW DO HISTORIANS KNOW ABOUT THE CRUSADES?
Activity 1: Crusader Castle, Crac des Chevaliers, Syria, 12th C

Activity Card

Historians often turn to art, architecture, and craftwork of the period they are studying for clues about how people lived and what they wanted to remember.

As a team, look carefully at the photographs of Crac des Chevaliers and discuss the questions below.

1. Why would the Crusaders build a castle?
2. What does the architecture of this castle (e.g., the floor plan and interior/exterior structures) tell you about how warfare was conducted in the medieval times?
3. If you lived inside this castle, how would you defend it against enemy attacks?
4. If you were an enemy invader, how would you plan your attack of this castle?
5. What were the roles of men and women inside the castle? What were the roles of children?

Design and build a castle or a fortress to protect your group from adverse forces. Present your castle to the class.

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Figure 1b: Activity Card

Unit: CRUSADES
HOW DO HISTORIANS KNOW ABOUT THE CRUSADES?
Activity 6: Gesta and Raymond's Eye-Witness Accounts of the Siege, Attack, and Capture of Jerusalem

Activity Card

An important resource for historians are eye-witness accounts of historical events. Gesta and Raymond both participated in the first crusade and wrote separate accounts of their experiences.

As a team, read the selections from Gesta and Raymond's accounts of the siege, attack, and capture of Jerusalem. Discuss the questions below.

1. When did the siege take place? How did geographic conditions (e.g., climate and terrain) play a role in the outcome of the siege?
2. Given that Jerusalem is surrounded by a wall, what might the "siege machines" have looked like? Where did they find materials for them?
3. If you were a Saracen, how would you defend your city?
4. The Crusaders were outnumbered 5 to 1. How do you account for their ultimate victory against such odds?

Design a mural which depicts the main events of the siege, assault, and capture of Jerusalem. You might consult the reproduction of a mural in this package. Share your mural with the class.

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came to feel that this was the way they ought to behave, and they criticized each other if someone refused to help or to explain.

Another important way a teacher can delegate authority to groups is through the use of roles. Every student plays a different role and the roles rotate. For example, one student is a facilitator whose job it is to see that all group members understand what to do and get the help they need. When someone wanders away from a group, for example, it is the facilitator's job to find out what is wrong and to get the student to rejoin the group. Another role might be the recorder who keeps notes of the group's discussion and checks to see whether individual reports have been completed. In other words, you get the students to mind each other's business and to do many of the supervising jobs that teachers usually do.

SIT: Oh, I do that. I use roles in groupwork. I usually set up activities so that one student is the artist, another is the writer, and a third looks up all the questions in the resource books.

CIA: Those are roles too, but they are not the same kind of roles we use in Complex Instruction. The roles you use are a way to divide the labor, whereas the roles we use are designed to help the group interact and work together. We call CI's roles procedural roles. Dividing the labor may seem efficient, but it doesn't encourage students to interact and talk with each other. According to the research on Complex Instruction, it's the process of talking and working together that produces the learning gains (Cohen 1984).

After you get the hang of these procedural roles, you see how to make the activity cards, the cooperative norms, and the roles work for you. You don't have to

solve all the groups' problems yourself. Say, for example, ten minutes after launching groupwork, you find a group floundering. In first approaching the group, you might ask them if they have read the activity card and discussed what they are supposed to do. If they have not, you could suggest that they do so and that you will be back in a few minutes to hear the results of their discussion. Or, if some students have questions, you might ask them to find out whether anyone in the group has the answer. Only when no one has the answer can the facilitator call you over to ask the question. These norms and roles really keep the "Teacher! Teacher!" cries at a minimum.

Curricular Materials for Group Work

SIT: My groups work pretty well when I have them reviewing for a test or working on mapping activities. I have trouble, however, when I'm trying to focus on real thinking, on getting the hard-to-understand concepts. I don't have good activities for groupwork; the ones at the end of the chapters don't work.

CIA: Proponents of CI believe that to get the most out of groupwork, you must begin by redesigning the curriculum. When we focus on developing higher-order thinking and on teaching central concepts, we will use groupwork and the CI activities designed specifically for groupwork. Don't panic! We do not use groupwork all the time. We will still use the textbook and the many valuable resources we've accumulated in this department over the years. To tell you the truth, what really sold me on participating in the program were the units they showed us at Stanford. I was willing to sign up just to get those materials.

SIT: What makes these materials so special?

CIA: The unit activities are organized thematically around a main idea or a central concept. For example, in one unit, students explore a basic question in our discipline: How do historians know? Students learn how historians examine texts, eyewitness accounts, artifacts, music, and art of a period to make sense of historical events. In the unit "Taking Your Proper Station: Feudal Life in Tokugawa, Japan," students learn about social stratification and social barriers. They examine these central concepts in a variety of contexts: the physical layout of a castle town, clothing and external symbols of rank, legal codes, and central social activities such as pilgrimages to religious sites. Integrated with this social studies unit is "Voices in Japanese Poetry," a literature unit. In it, students' understanding of social stratification is reinforced through reading poetry written by ladies of the court, women who toil in the fields, merchants, and the social elite. A final example: the unit on the Maya examines the importance of time in the Maya culture and the various ways the Maya organized their society to worship time. While working through each unit, students rotate through a number of activities; this gives them a chance to examine the central concepts in various contexts. Even if they do not understand the main idea in their first encounter, the light will go on eventually.

SIT: Some of my students couldn't care less about the Crusades, feudal Japan, or the Maya. If something isn't directly relevant or applicable to them, they just do not want to spend the energy.

CIA: It seems hard to believe, but even feudalism can be made interesting to adolescents. Using the CI model, students have opportunities to be active, to discuss, to figure things out by themselves—they therefore seem to be more motivated. Furthermore, in most activities there is a built-in project that allows them to generalize about the concept and make it relevant to them, here and now. For example, after examining a medieval song about a knight's dilemma between his duty to his king and his love for a beautiful woman, students write a song about a current event. I dreaded this activity, but the students loved it—music always wins them over.

SIT: When I did groupwork, I found that a few students usually did the work and the others just copied the answers. My students didn't really work together. They did what they usually do, except that their tables were pushed together, and they could socialize more easily.

CIA: What you describe happens when the tasks are too simple, and the answers too easy to get. When tasks are complex and open-ended and when students depend on one another to solve problems, they will more readily work together and stay on task. At first, these new responsibilities and new ways of learning took my students by surprise. As they realized I meant business, they enjoyed being taken seriously, thinking for themselves, and learning how to communicate their thoughts, opinions, and feelings. Because no single answer would suffice, students arrived at different solutions by following legitimately different paths. Open-ended, uncertain tasks increase the need for interaction, which, as you recall, leads to learning.

When I tried to adapt activities that I could use with CI, I found that this open-endedness was the most difficult for me to incorporate. We teachers tend to overspecify the tasks, to make instructions too explicit, and to assign problems that have one right answer. We are terrified that our students will make mistakes or will not "get it."

Multiple Abilities

SIT: These activities sound terrific for my high-achieving kids. But other students just don't know what to do—they really have nothing to contribute. Some of them even have trouble reading the instructions and never get anything done.

CIA: You've touched upon one of the main challenges of groupwork. We really need to change the way we look at the tasks and what some kids can and can't contribute. After using CI activities, I recognized that my students have strengths and that they can be successful in

ways I never noticed before. I have learned now that if students are not the best readers or the best writers, they can make important intellectual contributions when a task is a rich, multiple ability task.

CI activities are called multiple ability activities because many intellectual abilities are necessary for their successful completion. Traditionally, students have few opportunities to show how competent they really are. With multiple ability activities, students are offered many ways of demonstrating their intelligence. Recently, even psychologists like Gardner (1983) and Sternberg (1985) have argued that intelligence is multifaceted and not reducible to a single number such as an IQ.

When students work on CI activities, they can apply many intellectual abilities in addition to the traditionally recognized academic abilities of reading, writing, and quick computation. Let us return to the unit I mentioned earlier, "How Do Historians Know about the Crusades?" During this unit, students rotate among three types of group tasks. In the first type, students examine visual representations of historical artifacts: photos and a floor plan of the ruins of a castle built by the Crusaders in Syria. Students use visual-spatial abilities to analyze pictures, hypothesize about the architectural strengths and weaknesses of the castle, and to speculate why the Crusaders chose that particular location. Next, students design and build a three-dimensional model of a castle or a fortress that will protect their group from enemy invaders. Designing this model requires careful planning, mechanical ingenuity, and translating a two-dimensional sketch into a three-dimensional model—all intellectual abilities.

In the second type of task, students use musical abilities as they listen to medieval ballads, identify the musical instruments, and describe the mood and the message of the songs. Among the intellectual abilities students use in these tasks are hearing or creating melodies, hearing and creating rhythmic patterns, understanding musical expressions, and understanding how a song's melody and lyrics play off one another.

The third type of task relies on understanding textual sources such as excerpts from Pope Urban II's speech calling the masses to join the Crusades and eyewitness accounts of the siege of Jerusalem. After thorough analysis of the text, students translate these verbal messages into different media. They create a mural, design an ad campaign for Pope Urban II, or dramatize the siege of Jerusalem from an Arab point of view. Such activities require a host of intellectual abilities: understanding sophisticated texts, detecting sources of bias in a text, being empathic, relating a single textual passage to the larger scheme of events, and translating a text's message into nonverbal forms.

I am reminded of a particularly poignant example of the importance of multiple ability tasks for heterogeneous classrooms. Doug, a resource student mainstreamed from the special day class, became the star of his group because he was the one who best understood the schematic diagram of the castle. Doug happens to be a "Dungeons and Dragons" fan. His spatial perception ability in drawing and in visual reasoning had never before been tapped in class. When his classmates recognized Doug's contribution, they relied on him to help them interpret the visual materials, to build their castle, and to present their product. It was an unforgettable day for Doug, for me, and for his classmates.

When preparing to teach a unit, I analyze the activities carefully and create a list of the intellectual abilities necessary to complete tasks. In class, I name these abilities and show the students how each one is relevant. Gradually, they learn to recognize and to name the intellectual abilities themselves. More importantly, they are able to recognize these abilities in themselves and in their classmates. For example, during the second rotation of the "African Dilemma Tales" unit, students told me which specific intellectual abilities they used to complete the activities.

Treatment of Status Problems

SIT: This is all very interesting, but I still have a problem when I use cooperative learning. I can see how you could fix the task so that everyone could make a contribution, but that doesn't mean that all students *will*. Some students are always left out and others take over the group. Let me tell you about Dusty, a student I had last year. An A-student, Dusty was used to being successful. No matter what group I put her in, she took over. It had to be her way or no way. She was so frustrated she had her mother come in and talk to me. Meanwhile, another student, Ernesto, never got to say a word. I tried every way to encourage him, but he just seemed shy.

CIA: You're describing a problem all of us must face; it is called a status problem. The difficulty with Dusty is that she expects to be the most competent person in every group, no matter what the task; everyone else expects her to be the most competent as well. That combination leads her to talk the most and to have the most influence in just about every group in the classroom. Ernesto has the opposite problem. He expects to be incompetent in the group on every new task, and the other students expect so little of him that they don't pay any attention even when he tries to join in.

These different expectations for competence come from different status characteristics that work in a classroom. For instance, Dusty may have high academic status. We rarely stop to think about this, but our students create a ranking in each classroom based on how good they think everyone is in social studies. Those who are seen as the best students in social studies will tend to dominate cooperative groups in the classroom; those who are seen as poor students, perhaps because they don't

speak English well, are completely left out of small group discussions. Then there are those who have few or no friends. They have low peer status and are often treated as if they were incompetent, whereas those who are popular are listened to even when their ideas are poor.

SIT: What about differences between African-American, European-American, and Latino students?

CIA: Race and ethnicity are status characteristics, too. When you have a mixed-race or mixed-ethnic group, you may see the African-American or Latino student withdraw or be ignored. The most important thing in a classroom, however, is really how smart a student is perceived to be in schoolwork. If the minority student is a good student or is very popular, you probably won't see a status problem. Mentioning race reminds me that we also shouldn't forget about gender. By the time girls get to middle school, they are sometimes treated as low-status members of the group, unless they are strong academically or very popular.

SIT: This is an interesting analysis. I have seen this problem in my groups too, but I've never been able to figure out what to do. How do you handle it?

CIA: We can use two strategies to treat this problem. Treatments that come from sociological theory about status and research have demonstrated their effectiveness in the classroom (Cohen and Lotan, forthcoming). Using the multiple ability treatment, a teacher's job is to convince students that many different intellectual abilities will be necessary for the new group task. Of course it won't work unless you have real multiple ability tasks similar to those we talked about earlier. I take time before we get into groups to discuss with them how imagining, hypothesizing, dramatizing, reasoning, and visualizing will be necessary for the tasks they are going to undertake. Then, I always take time to say: "No one will be good at all these abilities. Everyone will be good on at least one." This is the most important part of the multiple ability treatment because it makes all students recognize that they will be good on some of the abilities and not so good on others. They realize that the group's success depends on listening to others and on taking advantage of what everybody has to offer.

SIT: Don't you feel awkward saying something like that?

CIA: I did at first, but I came to see that it was true. When you have good multiple ability tasks, kids surprise you. My resource student, Doug, astounded us all, and my A-students came to realize that they are not necessarily the best at everything—that they can indeed learn from others.

SIT: You mentioned two strategies. What is the other?

CIA: The other treatment we use is called assigning competence to low-status students. When the students are in their groups working on tasks, I go around carefully watching the groups and taking notes. I pay special attention to those students who are usually left out of their groups. I watch for those moments when they show how competent they are on one of the multiple abilities. For example, last year when we were doing the unit on feudal Japan, I discovered that Claudine had a good idea about how to build a castle town, but her group wasn't paying much attention to her. I stepped in and said, "I see that Claudine has a good plan for laying out the castle town. She can visualize exactly how it ought to go together. I think she's a good resource for this group because she has that ability to visualize things spatially." That is a powerful treatment because I am assigning competence to her on an ability that is needed for the group to complete the task. I have done it publicly so that the other students know that I expect her to be competent. I have made it specific so that she will know exactly what she has done well. I have also made it relevant to the work of the group. These three things make this treatment work. Research has shown that teachers who use both the multiple ability and assigning competence treatments don't have problems with some students dominating the groups and others not participating (Cohen and Lotan, forthcoming).

SIT: Won't the students be embarrassed if you single them out that way? I know some of my students are so afraid to look like schoolchildren.

CIA: Your power in this case comes from the fact that students tend to believe the evaluations teachers make of them. You are being completely honest—you never do this unless the student has exhibited an important intellectual ability. You don't gush about it either. You just state it in a low-key, factual way. Sometimes I take notes on intellectual contributions low-status students make, and the next day when I'm orienting the class for cooperative learning, I share my observations from the day before. I may mention how roles were played, how effectively some groups worked together, and I slip in some assignments of competence to low-status students. This approach seems to work well.

Breadth versus Depth

SIT: If I do everything you say, I'll never get to the end of the curriculum.

CIA: You raise a perennial dilemma in teaching social studies—breadth versus depth. Doing Complex Instruction takes more time than reading the textbook and doing seat work, but the higher-order thinking that takes place justifies the point. At the center of every CI unit is a conceptual theme. For instance, the Reformation unit is organized around the question, How do you challenge the authority of an institution? It's only by taking the time to rotate through the various group activities that students learn how a combination of factors reshape people's ideas and lead them to seek reform. One activity focuses on the role art and political cartoons play in forming and reforming public opinion, one

on the role individuals, like Martin Luther, play in catalyzing change, and one on the role the printing press, or the media, plays in spreading ideas. This is a powerful concept, one that I can use in later units, one that 8th grade teachers can tap into when they teach about the American Revolution. What my students learn goes well beyond the facts and dates of the Reformation.

After watching my students engage in CI last year, I became convinced that they were involved in many kinds of learning. They came to see major historical events as complex situations with multiple causes and consequences. To complete activities, they also had to practice making nuanced judgment about the influence of these causes and the extent of the consequences—that's higher-order thinking in my book. Most importantly for us as social studies teachers, they came to see that big ideas or concepts in history apply to other situations. When we were studying the Reformation unit, they connected challenges to the authority of the church with their own impulses to challenge the authority of institutions like school. Best of all, some actually said, "History can be fun." I wish I had my video on these kids dramatizing Luther's challenge of the Pope—it was fabulous. I'd rather spend a few extra days on the Reformation to give my students that rich experience.

What impressed me last year was that my students remembered the Crusades in June—and we studied it in January! Such recall rarely happens. Given the benefits of this groundwork, I'm willing to devote the time it takes to these activities.

Evaluation

SIT: I like what you're saying, and I'd like to hang my hat on this groundwork model. What holds me back is evaluation. What do you do about grades and testing when you have groups? What do you do if students don't put forth equal effort?

CIA: I've also struggled with that question. Complex Instruction helped me reframe issues of evaluation in groupwork. Evaluation has two faces: motivation and accountability. When I had students in groups before, I graded individuals because I was afraid that if I didn't, no one would work. I used my grade book as a form of extrinsic motivation. I learned that this practice often delivers a double-blow to the low-status student—i.e., students who look as if they aren't participating may not be involved because the others in the group do not perceive that they have something to contribute and, as a result, do not let them in, will not listen to them, or do not share materials with them. Students who appear to be shy or off-task may be shut out by the others. I realize that unequal participation is more complicated than an individual deciding to check out of the group. As a result, I cannot give a student a low grade for participation when that participation may be beyond the student's control.

SIT: So how do you handle the nuts and bolts of evaluating groupwork?

CIA: First, I no longer conceive of grades as a source of motivation. Instead, I know that because the activities are intrinsically interesting, the students will stay on task. Second, I still have to structure accountability. I hold the group accountable by the presentations they make to the class. Because each activity involves a group presentation, and because most students don't want to look bad in front of their peers, they will work quite hard to have a polished product. Last year my students took great pride in their presentations and enjoyed the praise of their peers. In addition, I hold the individuals accountable in two ways. The curriculum provides individual reports for each activity. These individual reports are writing assignments that provide students an opportunity to demonstrate what they have learned in the activity. I also continue to give chapter tests. Students who participate in the groupwork will have a deep understanding of the content and, therefore, perform quite well on these tests. At Stanford they told us that 11th graders who used multiple ability tasks in a history class did significantly better on written achievement tests than students who worked only with linguistic sources covering the same historical period. That study showed that multiple ability activities made a critical difference (Bower 1991).[1]

What's Next?

SIT: This sounds terrific, but I'm feeling overwhelmed. I have so much to learn, and I don't think I can make up those multiple ability tasks without a lot of help. Suppose I want to learn more about this stuff. What can I do?

CIA: You can take several routes. It all depends on how much change you are willing to make in your curriculum and the way you run your classroom. For instance, before we attempted CI, we went for a two-week institute at Stanford in the summer; then, during the year, CI staff developers observed us in our classrooms and sat down with us for three feedback sessions. Each session was based on three classroom visits. At the institute we learned about the theory and research behind CI and we had practical experience with students. If you were willing to commit that much time, and if we could find the funds for it, I could help you with observations and feedback because I will go for special training this year and will be a certified CI Trainer.

SIT: I'd love to do that, but I'm expecting a baby in June, so I couldn't commit to something that ambitious. Is there anything else I can do?

CIA: A good way to get started is to read Elizabeth Cohen's book, *Designing Groupwork: Strategies for Heterogeneous Classrooms* (1986). If you find another teacher to team with, you can each design a multiple

ability task, try it out, observe each other, and decide how to improve it for next year. That way, you will create at least two tasks you can share. Slowly, you can build a file of groupwork activities. In her book, Cohen tells how to manage the classroom and how to do status treatments.

Conclusion

In the conversation we overheard, the teachers focused on three essential components of small-group instruction: classroom organization, the nature of the curriculum, and, most importantly, treatment of status problems in heterogeneous small groups.

Organization of the Classroom for Groupwork

Groupwork is an effective strategy when the goal of instruction is the development of higher-order thinking and conceptual understanding. In groupwork, teachers give up their traditional role. Direct supervision of students' activities in the groups becomes impractical, so the teacher delegates to students the authority to manage their groups and to complete their tasks. When teachers are advised to delegate authority to their students, they often fear losing control of the classroom. Complex Instruction, however, uses a system of cooperative norms and student roles to prevent chaos. The teacher holds both groups and individuals accountable for their learning. Groups are held accountable by the presentations they make to the class; individuals are held accountable by writing individual reports. Delegation of authority by the teacher and the installation of the management system enhances the rate of interaction in groups. Appropriate interaction furthers learning.

Nature of the Curriculum

To get the most out of groupwork, teachers must design or adapt learning tasks specifically for that purpose. Complex Instruction activities are organized into conceptually coherent, thematic units. By completing the various activities of a unit, students encounter the central concept in various contexts, thus gaining a better and deeper understanding. CI activities are open-ended and complex because more than one legitimate outcome and more than one way to approach and to complete the task are available to the learners. Such healthy uncertainty enhances student interdependence and increases interaction. Again, appropriate interaction furthers learning.

Most importantly, CI activities require many intellectual abilities for their successful completion. By incorporating musical, dramatic, artistic, kinesthetic, spatial, visual, and linguistic abilities, we expand opportunities for students both to show competence and to gain access to understanding the tasks. Multidimensional, multiability tasks broaden the range of opportunities for more students to be seen as smart.

Treatment of Status Problems

Groupwork and the multiple ability curriculum that supports it set the stage for teachers to address status problems in the heterogeneous classroom. Using Complex Instruction, teachers learn how to recognize and treat status problems. Unless teachers treat these problems, high-status students will continue to dominate the interaction and to learn more than low-status students who will be shut out from the group and will learn less. The gap will widen—the rich will get richer, and the poor will get poorer.

In treating status problems, teachers convince students that many abilities are necessary and that although everyone is good on at least one ability, no one is good at all of them. Furthermore, teachers assign competence to low-status students by making their successes public and relevant to their groupmates. Status treatments narrow the gap between the rates of interaction of high- and low-status students by raising the rates of participation of the low-status students. More balanced interaction furthers more balanced, yet much higher, learning outcomes.

Complex Instruction permits teaching at a high level in linguistically and academically heterogeneous classrooms. Although the instructional strategies described take time and effort to implement, the potential for bringing about significant intellectual growth in all students makes the effort worthwhile.

Note

[1]For more information about the curriculum developed for this study, contact Dr. Albert Bower, Teachers Curriculum Institute, 281 Carolina Lane, Palo Alto, CA 94306.

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NCSS POSITION STATEMENT

Ability Grouping in Social Studies

Prepared by the Ad Hoc Committee on Ability Grouping

Approved by NCSS Board of Directors, 1992

Compelled by research evidence and motivated by a commitment to equal opportunity and the fostering of democratic ideals, National Council for the Social Studies opposes ability grouping in social studies. Research on ability grouping generally indicates that this common educational practice works against democratic egalitarian norms, leads to maldistribution of racial and ethnic groups in lower tracks, hinders the progress of low-ability groups by providing an inferior education, is destructive to student self-esteem, and fails to offer students worthwhile educational benefits to compensate for its negative effects.

A social studies classroom should model democratic values and be characterized by shared responsibility, interdependence, the value of the individual, and equality of educational opportunity. Basic to citizenship education is the goal of encouraging students to work with others from different backgrounds and, thus, learn to participate in a democracy. These purposes are incongruous with homogeneous grouping.

NCSS urges educators to support heterogeneous grouping in social studies classrooms and to work to foster appropriate strategies suited to effective instruction in such groups, including the following:

- Organize for instruction using cooperative learning groups involving individual accountability and group goals.
- Foster active engagement in learning to develop social studies content, concepts, and skills.
- Use team-teaching approaches to provide the flexibility to meet student needs.
- Apply peer tutoring approaches.
- Use a wide range of instructional strategies calling upon many different skills and abilities to meet the range of learning strengths in a diverse class.
- Consider mastery learning approaches.
- Vary instructional materials and provide alternative ways of learning.
- Involve students in self-evaluation and metacognition, that is, thinking about their own thinking.
- Diagnose problems frequently to identify needs, and use flexible groupings to address specific needs.
- Integrate thinking skills into instruction.
- Use many modes of presentation to develop understanding for all students.
- Use learning centers.
- Vary assessment approaches to allow students many ways to demonstrate what they know and are able to do.

NCSS urges social studies educators to work actively to oppose the common practice of ability grouping in social studies and to contribute to the growing body of literature about effective instructional approaches in heterogeneously grouped classes.

Background

Review of the Literature on Ability Grouping

Ability grouping exists to address one of the central issues of elementary and secondary education: Students differ in their individual rates of learning, knowledge, skills, and developmental stages (Slavin 1988).

A review of research literature about ability grouping points out that most educational research provides evidence against ability grouping (Froman 1981). Research has uncovered several problems with ability grouping. Braddock and Slavin (1989a) concluded that ability grouping works against democratic, egalitarian norms. They found no evidence that ability grouping is instructionally effective. In addition, they found maldistribution of race-ethnic subgroups in curriculum tracks and ability groups (Braddock and Slavin 1989b). Similarly, Raze (1984, 1–9) found that low-ability tracks correlated with socioeconomic status. Braddock and Slavin agree with Good and Marshall (1984, 15–38), who also concluded that ability grouping is a questionable practice.

Trimble and Sinclair (1987) found little evidence that ability grouping benefited average- and low-ability students. Benedict (1986, 1–45) reviewed research literature related to ability grouping and concluded that ability grouping is a questionable instructional practice and hinders the progress of low-ability groups. Once students are placed in low-ability classes, it is unlikely they will move out of those classes. According to Felmlee and Eder (1983), students assigned to low-ability groups are more likely to become inattentive.

Research evidence does not support the general belief that ability grouping enhances students' self-concept. Fagan (1980) questioned ability grouping because of the possible negative effects on students' self-concept. Kulik and Kulik (1984) found no significant effect on self-concept from ability grouping; and Froman (1981) came to the same conclusion. Allan (1991, 64) concluded that the effects of ability grouping on self-esteem were unclear.

Research on the Spencerport Central School District in New York showed that when students were heterogeneously grouped in high school classes, the number of students taking and passing the New York State Board of Regents examination increased dramatically. The district's elementary and middle schools showed similar results in relation to meeting or surpassing the district's mastery levels (Sudlow 1989, 13–14). Winitzky (1991) also concluded that heterogeneous grouping can enhance achievement because of the more productive interaction that might occur within homogeneous groups.

Tobias (1989) refers to attacks on ability grouping from well-known educators, including Jeannie Oakes, Benjamin Bloom, Henry Levin, and the *Atlantic* Washington editor, James Fallows. They challenge ability grouping for various reasons, such as the effects on achievement, the number of dropouts, and the possible influence on self-esteem. Berghoff and Egawa (1991) believe that this critical questioning of ability grouping should stimulate educators to rethink schooling and classroom organization.

A few studies demonstrate positive evidence about the effects of ability grouping on gifted students. Kulik and Kulik (1984) concluded that gifted students in homogeneous classrooms benefited from the experience. Kulik and Kulik (1982, 620–621), in an earlier study, found that only students in honors classes benefited from ability grouping. Benedict (1986) found that high-ability groups benefit, but low-ability students are hindered by interclass ability grouping. Feldhusen (1989), in a review of research about gifted students, concluded that gifted students who are in homogeneous groups are stimulated more and are more enthusiastic about what they study than those in heterogeneous groups. Allan's (1991, 64) study of ability grouping led her to conclude that some forms of homogeneous grouping have positive effects on gifted students. In contrast, Goldberg, Passow, and Justman (1966, 163–164) concluded that more homogeneous classes did not increase academic achievement for *any* ability level.

Ability Grouping in Social Studies

Although limited research evidence is available on ability grouping with respect to other subjects, Slavin's (1990) review of research about ability grouping found evidence favoring heterogeneous groups for social studies classes. The research review found evidence of strong effects favoring heterogeneous groups in social studies. Other studies found no differences or slight effects, but in the same direction. Slavin believes that this does not, however, provide enough evidence to conclude that heterogeneous grouping in social studies has a positive effect.

Thompson's (1973) research supported heterogeneous groups in social studies. He questioned the universality of his conclusions supporting heterogeneous grouping techniques, however, because of the sizable number of matched pairs—32 out of 120—that performed better in homogeneous groups.

Vakos (1969) studied ability grouping in U.S. and world history classes. The experimental group included 87 incoming eleventh grade students while the control group was composed of 105 eleventh graders. The same teachers taught both groups. From Vakos's research, Slavin concluded that part-time grouping does not appear to make a difference in achievement for the experimental group in U.S. and world history when comparing the entire control group with the entire experimental group. This adds to the argument that high-ability and extremely low-ability students may profit when they are grouped by ability (Slavin 1990). In addition to research on achievement test score comparisons, Thornton (1991) points out that the daily decisions teachers make about curriculum and instruction result in mental grouping and tracking that affect students' self-esteem.

Ability Grouping Regarding Minority and Handicapped Students

The literature review pointed toward another concern regarding ability grouping: the effects of grouping on minority and handicapped students. When schools practice ability grouping, a disproportionately large number of minority students usually are in below-average groups, average groups, and general or vocational tracks. Once schools place students in average and below-average groups, they tend to remain in these groups in future years and for different subjects. According to Veves (1989), higher-order thinking skills such as analyzing, making inferences and comparisons, and evaluating are not being taught

to students in average and below average tracked classes. Sorensen and Hallinan (1986, 536) reported that ability grouping "suggest[s] that grouped classes not only provide fewer opportunities for learning but also place greater emphasis on race differences."

Further, some ability grouping policies could violate Title VI of the Civil Rights Act of 1964. Title VI prohibits discrimination on the basis of race, color, or national origin in federally funded programs. The Carnegie Commission Report on Middle Schools recommended abolishing tracking because it discriminates against minorities (Rachlin 1989). "The social concerns of our current culture may demand its [ability grouping's] abolishment because of segregation policies which frequently accompany ability grouping" (Froman 1981).

Regarding handicapped students, Public Law 94-142 mandates mainstreaming in classrooms by the inclusion of students with diverse handicaps. This law has extended the range of students' abilities, thereby making many classes more heterogeneous. In his review of research on social studies for at-risk students, Curtis (1991, 171) explains:

> As might well be anticipated, the findings of these studies suggest that cooperative learning tends to promote interactions between handicapped and nonhandicapped children. Furthermore, it appears from several of the studies that these interactions are likely to be positive, consisting for the most part of nonhandicapped students helping handicapped students to learn, and to promote friendships outside the classroom—at least for the duration of the study. It is possible that cooperative learning leads to increased self-esteem in handicapped children, but this is difficult to discern in the studies reviewed here.

"[T]he goals of social education, as described by the National Council for the Social Studies (1984; 1989) are highly congruent with the behavioral outcomes associated with cooperative task and reward structures, such as cross-ethnic acceptance and interaction and integration of handicapped students" (in Winitzky 1991, 535).

Summary

Ability grouping has been controversial for many years, yet it is used widely in elementary classrooms throughout the United States. At the secondary level it occurs when students select different curriculum tracks such as general, academic, and vocational. It also occurs inadvertently when students select individual courses such as honors courses or band, or participate on varsity athletic teams. Scheduling courses with a limited number of sections often results in additional accidental homogeneous classes that otherwise would be heterogeneous.

This committee's position is that heterogeneous grouping in social studies classes is best for all students. Most of the research literature provides evidence against ability grouping and support for heterogeneous classes. Only a few of the research studies show that high ability, gifted students benefit from ability grouping. Ability grouping for minority and handicapped students requires special educational and legal concerns.

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